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ABSTRACTS

FIBERS A

MOLECULAR WEIGHT AND DEGREE OF POLYMERIZATION OF FIBERS AS QUALITY CHARACTERISTICS. W. Schefer. Textil-Rundschau 14, No. 9: 514-518 (1959). In German. Through BCIRA 39: 4834 (1959). (846)

The relationship between molecular weight and fiber tendering is discussed, and directions are given for the experimental determination of molecular weights and degrees of polymerization by viscosity measurements.

Natural fibers A1

MID-SOUTH AND CALIFORNIA 1959 COTTON. F. L. Gerdes. Textile World 110: 61, 157-158 (Feb. 1960). (847)

Fiber and spinning tests show that in comparison with 1958 pickings nearly all properties are better because of favorable weather and improved ginning methods.

EFFECT OF EXPOSURE TO THE ADEN CLIMATE ON COTTON LINT STRENGTH. E. Lord and K. R. M. Anthony. Empire Cotton Growing Rev. 37: 10-14 (Jan. 1960). (848)

Under the normal climatic conditions prevailing at picking time the loss in tensile strength of freely exposed material may approach 1% per week. Tables, 4 refs.

TERYLENE PROCESSING ON COTTON AND MODIFIED COTTON MACHINERY. J. Thomson (Imp. Chem. Inds. Ltd). J. Textile Inst. 51: P36-P43 (Jan. 1960). (849)

This paper deals briefly with some of the problems likely to arise in processing Terylene, and the methods used to deal with them. Photos.

WOOL: PROPERTIES, USES, AND FUTURE. J. W. S. Hearle (Manchester Coll. Science & Technol.). Textile Mfr. 85: 529-535 (Dec. 1959). (850)

Following a general description of sheep farming, grading, and world trade, the chemical constitution, physical structure, properties, and uses of wool are discussed. Photos, diagrs, tables.

Manmade fibers A2

MERAKLON POLYPROPYLENE FIBER PROPERTIES. Montecatini Research Inst. Skinner's Silk & Rayon Record 34: 39 (Jan. 1960). (851)

Fiber and fabric properties, as well as cost figures, are given.

YARN, STAPLE, AND TIRE CORD PRODUCTION: IMPORTANT DEVELOPMENTS DURING 1959. Man-Made Textiles 36: 46-47 (Jan. 1960). (852)

Developments covered include: automation in rayon staple process as exemplified by the fluid bed technique in wood pulp manufacture (BP 809 429) and electromechanical steeping presses (BP 810 300); metering pump controls for slub yarn manufacture (BP 811 128 and 812 022); addition of polyoxyethylene esters to viscose spinning baths for yarns with high strength, resistance to abrasion and fatigue, and low swelling properties (BP 812 226). Photos, table.

FIBROUS POTASSIUM TITANATE: A NEW HIGH TEMPERATURE INSULATING MATERIAL. H. C. Gulledge (E. I. du Pont de Nemours & Co.). Ind. Eng. Chem. 52: 117-118 (Feb. 1960). (853)

These new crystalline fibers of small diameter and high refractive index form lightweight felts which can be used at temperatures up to 2200° F. Their ability to diffuse and reflect infrared radiation to a high degree offers many practical applications. Tables, 5 refs.

FIBROUS ACETYLATION OF CELLULOSE. R. W. Moncrieff. Textile Mfr. 85: 541-543 (Dec. 1959). (854)

The advantages of manufacturing Alon acetate fiber by the continuous acetylation of viscose rayon staple are cited, and its basic fiber construction, mechanical properties, moisture regain, heat resistance, and handle are described.

YARN PRODUCTION B

IMPROVEMENT OF CLEANING METHODS IN SPINNING MILLS. PART 7. CHARACTERISTICS OF A VERTICAL BLOW NOZZLE. Y. Niitsu, S. Fujimori, and Y. Hosokawa. J. Textile Machy. Soc. Japan 12, No. 10: 22-35 (1959). In Japanese (English summary). Through BCIRA 39: 4733 (1959). (855)

Theoretical formulas are developed for free and radical jet flow (Reichardt's hypothesis) and the range of intermediate flow has been determined experimentally.

HIGH PRODUCTIVITY FALSE TWIST METHODS FOR TEXTURING POLYAMIDE YARNS. B. Piller. Industria Textila 10, No. 10: 405-410 (1959). In Rumanian (English summary). Through BCIRA 39: 4737 (1959). (856)

The Tvasil adaptor for Hamel and Totex type throwing machines is described. Each adaptor delivers two ends, Z and S false twist respectively, heat-set and wound on a common bobbin. As compared with the Helanca process (4.5 g/spindle/8 hr) each adaptor produces 40 g/spindle/8 hr.

FALSE TWIST PRODUCTION OF CRIMPED YARNS. L. Bourgier. Industrie Textile: 435-437 (June 1959). In French. Through BCIRA 39: 4736 (1959). (857)

The process described (developed by Touzery) consists in passing a thread successively over two devices, the first designed to inhibit the twist propagation in the direction of the bobbin and the second to twist and untwist the thread to the same extent in two successive zones of its passage, above and below the second device, the thread being preset between these two zones. The apparatus is described, and the advantages of the new process are enumerated.

ELECTRICALLY CONTROLLED OIL HEATER FOR FIBER CRIMPING. M. Czolczynski and Z. Krotowski. Przeglad Wlok. 13, No. 7: 360-366 (1959). In Polish. Through BCIRA 40: 9 (1960). (858)

The heater was developed to maintain a constant predetermined temperature at all working points of a fiber crimping installation. In view of the simple construction, reliable operation, and high stability of the adjusted temperature the system is also suitable for other industrial installations.

PLASTIC FILM FOR PRESSURE ROLLERS. W. Floersheim. Brasil Textil: 24-25 (June 1959). In Portuguese. Through BCIRA 39: 4719 (1959). (859)

A protecting plastic film, with excellent elasticity and durability, good adherence to the roller surface, high resistance to mechanical impacts and friction, and impermeability to humidity and grease, is produced by the Duokolan Industrias Plasticas SA, Sao Paulo.

WOOLEN YARN MANUFACTURE. G. H. Thorndike (Wool Inds. Research Assoc.). J. Textile Inst. 51: P28-P35 (Jan. 1960). (860)

Problems of blending, oiling, carding, and spinning are surveyed.

ASSESSMENT OF YARN QUALITY FOR WEAVING. J. Slack. Textile Mfr. 85: 536-540, 548 (Dec. 1959). (861)

The characteristics and properties of cotton yarn and tests and checks used at various stages of spinning for their control are described. Examples of record forms used are included.

AUTOMATION IN SPINNING. M. Halleux. Bull. Inst. Textile France No. 82: 7-24 (June 1959). In French. Through BCIRA 39: 4724 (1959). (862)

Recent developments in spinning equipment are reviewed, with special reference to automatic feeding, cleaning, lubricating, control, and maintenance of modern machines and their advantages.

MODERNIZATION OF COTTON SPINNING EQUIPMENT. V. F. Beloshapko. Tekstil. Prom. 19, No. 8: 51-53 (1959). In Russian. Through BCIRA 40: 53 (1960). (863)

The author discusses various new devices introduced in spinning machines, drawframes and speed frames, carding machines, and the mixing and picking room, which considerably increase yarn output and working efficiency.

OILING AND EMULSION TREATMENT FOR COTTON AND STAPLE FIBER. T. K. Zinov'eva. Tekstil. Prom. 19, No. 8: 66-69 (1959). In Russian. Through BCIRA 40: 37 (1960). (864)

Oiling of cotton fibers in the condenser spinning system is conveniently carried out by a device fitted on single stage picking machines. It improves yarn count regularity and sliver strength and reduces the number of end breaks on spinning machines. This device is not recommended for oiling staple fiber on sliver lap machines. In this case the number of end breaks increases on speed frames and the yarn regularity decreases. Treatment of staple fiber with an emulsion containing 2% wetting agent and 98% water is more effective.

SPINNING MACHINES PRODUCED IN CZECHOSLOVAKIA V. Houdek. Textil 14, No. 9: 326-328 (1959). In Czech. Through BCIRA 39: 4725 (1959). (865)

Spinning machinery exhibited at the Sample Fair in Brno is reviewed.

Opening, picking, fiber preparation B1

MILL CHECK-UP. PART 1. THE SUPERINTENDENT INSPECTS COTTON-MIXING OPERATIONS. A. L. Landau. Textile World 110: 49, 154-155 (Feb. 1960). (866)

Spot checks for danger signals in the mixing department are described.

COUNT CONTROL IN OPENING. A. B. Roberts (China Grove Cotton Mills). Textile Inds. 124: 121, 177 (Feb. 1960). (867)

A chart system of recording picker lap weights to minimize lap weight and cleaning variations is described. Diagrs.

Carding and combing B2

IMPROVEMENT OF LAP PREPARATION. A. K. Teryushnov. Tekstil. Prom. 19, No. 8: 21-24 (1959). In Russian. Through BCIRA 40: 41 (1960). (868)

Experiments have shown that by applying a new system for lap preparation, e.g. using 2 drawframes and a sliver lap machine, a considerable increase in the productivity of combing and carding machines, a decrease in the amount of waste, and an improvement of yarn quality, in spite of lowering the sliver count, can be achieved.

CARD SLIVER REGULATING DEVICE FOR COTTON SPINNING MILLS. H. Perner, G. Schauer, and S. Pilz. Deut. Textiltech. 9, No. 7: 349-353 (1959). In German. Through BCIRA 39: 4716 (1959). (869)

The device described can be fitted between the delivery rollers and the pressure rollers of the cotton flat card for the equalization of the card sliver and improvement of the fiber position. The draft is proportional to the sliver thickness, and its degree ranges between 1.0 and 2.5. It is adjusted so that the thinnest sliver sections are drafted only slightly. Scanning, amplification, and control are effected by mechanical, photoelectric, and electrical means, respectively. The mass inertia of the regulating device is used as retarding means, in adaptation to the scanning distance.

AUTOMATION IN THE EQUALIZATION OF CARD SLIVERS. C. Marviel. Industrie Textile: 421-425 (June 1959). In French. Through BCIRA 39: 4715 (1959). (870)

Various embodiments of automatic sliver-thickness control are described and illustrated.

PRODUCTION OF CARDED COTTON YARNS AT REDUCED FLAT SPEED. J. Peukert. Deut. Textiltech. 9, No. 7: 354-356 (1959). In German. Through BCIRA 39: 4714 (1959). (871)

Spinning experiments on cards with reduced flat velocity (from 80 to 40 mm/min) resulted in yarns, whose quality was not impaired as compared with normally spun products, and in considerable savings of material, working time, energy, etc.

EFFECTS OF CARDING ON FIBER ORIENTATION. K. Fujino and W. Itani. J. Textile Machy. Soc. Japan 12, No. 10: 1-9 (1959). In Japanese (English summary). Through BCIRA 39: 4713 (1959). (872)

Fiber orientation deteriorates as a consequence of transfer between cylinder and doffer, and doffer and doffer comb; it improves gradually in card sliver with increase in calender draft. The number of neps in the card web increases gradually, and the fiber orientation improves slightly, as the quantity of cotton on the cylinder increases, or as the velocity of the takerin roller or the flat speed decreases.

WHITIN MODEL M WOOL CARD. Whitin Mach. Works. Whitin Rev. 26: 19-33 (Dec. 1959). (873)

Features are noted and a floor plan and sectional diagram for a three cylinder set are included. Photos, diagrs.

ZINSER CARDING MACHINE. Melliand 41, No. 1: 3-4 (1960). (874)

Features of the Zinser card include rollers, fitted with all steel clothing, which are arranged over the large cylinder in the place usually provided for the flats. The revolving rollers and the reduced dimensions of the cylinder and doffer are the main characteristics. Photos.

METALLIC CARD CLOTHING IN COTTON CARDING. B. Schaffer (Textile Research Inst., Budapest). Textile Recorder 77: 54-56 (Feb. 1960). (875)

A theory to explain the loading of flexible cylinder wire on revolving flat cards is suggested, and this theory is applied to explain the absence of loading with rigid metallic wire. The results of comparative tests with these two alternative coverings are also discussed. Diagrs, tables.

EXAMINATION OF COTTON FLAT CARDS WITH STRENGTHENED TAKERIN. J. Borowicz. Przeglad Wlok. 13, No. 7: 335-338 (1959). In Polish. Through BCIRA 40: 42 (1960). (876)

A study was made on a cotton flat card which was provided in the takerin zone with an additional pair of opening and cleaning rollers. The results were presented in graphs, on the basis of which conclusions were drawn as to the construction of a card on industrial scale with an output of 8-10 kg/hr.

ADVANTAGES OF IMPROVED LAP FEED ON CARDING MACHINES. Melliand Textilber. 40, No. 10: 1135-1136 (1959). In German. Through BCIRA 39: 4712 (1959). (877)

Improved feeding and preopening of the material on a cotton card are discussed.

IMPROVEMENTS IN DACRON CARDING. T. G. Clayton (E. I. du Pont de Nemours & Co.). Modern Textiles Mag. 41: 34-38 (Feb. 1960). (878)

The advantages of using a granular conversion unit (in place of the conventional flats) in conjunction with metallic wire on the doffer and cylinder are presented. Photos, diagrs.

DOUBLE WEIGH PAN HOPPER FEEDER FOR CARDS. Redshaw & Co. Ltd. Textile Recorder 77: 71-72 (Feb. 1960). (879)

Operation and features of the new machine, which is suitable for application to all types of cards, are described. Photos.

WOOL CARD GRINDING TECHNIQUES. W. J. Crofts. Textile Inds. 124: 122-125, 177 (Feb. 1960). (880)

PLASTIC ROLLER STICKS FOR ROLLER CARDS. H. Krupp. Spinner u. Weber 77, No. 22: 1375 (1959). In German. Through BCIRA 40: 43 (1960). (881)

Drawing and roving B3

REGULATING SYSTEMS FOR SLIVER EQUALIZATION. PART 9. PRACTICAL CONSTRUCTION OF THE REGULATING ELEMENTS: THEIR MOST IMPORTANT CHARACTERISTICS AND PROPERTIES. W. Wegener and H. Bechlenberg. Textil-Praxis 14, No. 9: 877-882 (1959). In German. Through BCIRA 39: 4717 (1959). (882)

In continuation of previous articles (abstr. 2307/59, 2917/59, 4079/59, 4080/59, and 44/60) special attention is paid to the amplifying system and the servo-motor and to their mechanisms, which are described and illustrated by diagrams.

REGULATING SYSTEMS FOR SLIVER EQUALIZATION. PART 10. PRACTICAL CONSTRUCTION OF THE REGULATING ELEMENTS: THEIR MOST IMPORTANT CHARACTERISTICS AND PROPERTIES. W. Wegener and H. Bechlenberg. Textil-Praxis 14, No. 10: 990-995 (1959). In German. Through BCIRA 39: 4718 (1959). (883)

The authors draw special attention to a retarding device for regulating the drawframe, the mechanism of which is described and illustrated. Investigation is also made into the cooperation of all regulating elements, as a result of which a high equalization of the slivers is claimed to be obtained.

HIGH DRAFT FLYER FRAME TYPE PA9. D. Barylowicz. Przeglad Wlok. 13, No. 7: 367-368 (1959). In Polish. Through BCIRA 40: 47 (1960). (884)

A detailed description is given especially of the drafting system of the flyer frame PA9.

DOUBLING IN COTTON SPINNING. A. Valota. Industrie Textile: 673-679 (Oct. 1959). In French. Through BCIRA 39: 4721 (1959). (885)

The problems of retaining 3 passages on drawframes and of the optimum number of slivers to be doubled are discussed, with special reference to the equalization of long-wave irregularities originating from the card or combing machine, the much smaller short-wave irregularity, and the parallelization of the fibers by the card clothing. The coefficient of equalization due to doubling is shown to be proportional not to the number of doublings but to its square root.

ELECTRICAL DRIVE AND AUTOMATIC CONTROL DEVICES ON THE MODERN FLYER FRAME. K. Ossmann. Melliand 41, No. 1: 4-9 (1960). (886)

The advantages of the smooth acceleration motor and automatic controls for broken ends and slivers, threading, and sliver feeding are discussed. Photos, graphs.

DRIVE AND CONTROL OF MODERN SPEED FRAMES. K. Ossmann. Melliand Textilber. 40, No. 10: 1129-1132 (1959). In German. Through BCIRA 39: 4722 (1959). (887)

Methods of ensuring efficient and economical operation of the electric drive for flyer frames are discussed. Various types of motors which can be used are described, and additional devices for stopping the machine in the case of thread or sliver breakage and for automatic setting of the flyers in threading position are enumerated.

GAGING DEVICE FOR MEASURING THE PRESSURE OF TOP ROLL WEIGHTING. O. König. Textil-Praxis 14, No. 9: 904-905 (1959). In German. Through BCIRA 39: 4720 (1959). (888)

A device is described, by means of which the top roll weighting pressure, the spring constant of the weighting spring, the friction value of the top roll suspension, and the height adjustment of weighting arms can be efficiently measured.

SLIVER DRAWFRAME CE8 FOR COTTON TYPE FIBERS. A. Chalko. Przeglad Wlok. 13, No. 7: 364-366 (1959). In Polish. Through BCIRA 40: 46 (1960). (889)

The construction of the prototype of the Polish CE8 drawframe for cotton, cotton-type staple fibers, and blends from 28-40 mm fibers is described, and experimental results obtained on it are reported, together with improvements made (increase of sliver delivery, spring weighting of the drawing system, reduced height of the machine, control signals to indicate incorrect operation of the machine, etc.).

MODERNIZATION OF DRAWING FRAMES. L. N. Karpinskaya. Tekstil. Prom. 19, No. 8: 71-72 (1959). In Russian. Through BCIRA 40: 45 (1960). (890)

The modernized 4-roller drawing frame described in a previous article (abstr. 760/59) processes cotton as well as staple fiber in a single passage without lowering the quality of the sliver and yarn. Comparative results obtained after processing the intermediate products and cotton yarn on a modernized drawing frame at a total draft of 14 in a single passage and on the usual 4-roller system at a total draft of 6 in two passages are given in a table.

OMM PIN DRAFTER AND AUTOEVENER. Textile Recorder 77: 72 (Feb. 1960). (891)

The machine is basically a high speed intersecting gill box, one head, one delivery with a conventional drafting arrangement in the gilling section followed by a second drafting zone in which a low and variable corrective draft is applied. Diagr.

Spinning, winding, twisting B4

DEVICE FOR INSTALLING C-SHAPED RING TRAVELERS. E. Menke. Textil-Praxis 14, No. 9: 892-893 (1959). In German. Through BCIRA 39: 4729 (1959). (892)

Brücker AG have developed this new device. The author describes the economical operation of the tool.

TRAVELERS AND SPINNING RINGS. German Standards Comm. Melliand Textilber. 40, No. 10: 1149-1154 (1959). In German. Through BCIRA 39: 4728 (1959). (893)

The article contains the following German draft specifications: DIN 63800, ring travelers for spinning and twisting rings; DIN 64000, spinning rings; DIN 64001, twisting rings for ear-shaped travelers.

EFFECT OF PRELIMINARY DRAFT AND ROLLER SETTING ON THE QUALITY OF THE YARN OBTAINED ON THE BALMES HIGH DRAFT SYSTEM. R. Audivert. Investigacion e Informacion Textil 2, No. 2: 89-96 (1959). In Spanish. Through BCIRA 39: 4730 (1959). (894)

Experiments carried out on Brazilian cotton, alone and in a blend with viscose staple, showed that both the draft and the roller position affect the yarn quality. Insufficient preliminary draft leads to a certain inaccuracy in establishing the correct roller position. The optimum draft distribution can be determined by means of the formula given.

COMING TO GRIPS WITH ROLLER SLIPPAGE. N. H. Pomfret (Pomfret Mills). Skinner's Silk & Rayon Record 34: 44-45 (Jan. 1960). (895)

The causes and effects of drafting roll slippage are explained. Diagr. Previously published in Textile World 109: 51, 205-206 (Sept. 1959).

EFFECT OF TWIST UPON YARN AND FABRIC BENDING PROPERTIES. D. N. E. Cooper (Courtaulds Ltd). (Letter to the editor). Textile Research J. 30: 150-151 (Feb. 1960). (896)

FANCY YARNS AND PRINCIPLES OF FANCY TWISTING. PART 1. J. Ecker. Textil-Praxis 14, No. 10: 1015-1017 (1959). In German. Through BCIRA 39: 4734 (1959). (897)

The author reviews various methods and materials for producing fancy yarns.

ON THE THEORY OF YARN TWISTING. M. Zeidman. Industria Textila 10, No. 10: 424-426 (1959). In Rumanian (English summary). Through BCIRA 39: 4856 (1959). (898)

The geometry of twisting singles and folded yarns is discussed briefly.

PHYSICS OF YARN TENSIONS AND BALLOON SHAPES IN SPINNING, WINDING, AND SIMILAR PROCESSES. A. E. DeBarr (Shirley Inst.). J. Textile Inst. 51: T17-T38 (Jan. 1960). (899)

The factors determining yarn tensions and balloon shapes in spinning, winding, and uptwisting are discussed in physical terms, the aim being to provide a pictorial account of the nature and interplay of the forces acting. Special attention is paid to the energy considerations involved, and the relations between the tension in the yarn and the work that has to be done to keep the system rotating are discussed. The effects of frictional, centripetal, air-drag, and Coriolis forces are first discussed separately, and their magnitudes are compared for different conditions. The way in which these forces determine yarn tensions and balloon shapes in spinning, winding, and uptwisting are then considered. Diagrs, graph, tables, 11 refs.

DETERMINATION OF THE OPTIMUM PRELIMINARY AND MAIN DRAFTS ON THE TEXTIMA-RING SPINNING MACHINES (1958 CONSTRUCTION) IN COTTON YARN SPINNING Nm 100 (10 TEX). E. Tittman and H. Paul. Deut. Textiltech. 9, No. 8: 407-408 (1959). In German. Through BCIRA 40: 54 (1960). (900)

Experiments have shown that by introducing higher drafts in cotton spinning the productivity is increased without impairing the quality. Data referring to the experimental conditions are summarized in a table.

STATISTICAL ANALYSIS OF THREAD BREAKAGE DISTRIBUTION. S. Gruoner. Melliand Textilber. 40, No. 11: 1250-1257 (1959). In German. Through BCIRA 40: 187 (1960). (901)

The possibility of determining processing faults by applying the chi-square test to compare the practical with the theoretical end-break distribution is investigated. By taking into account machine defects and faults in the material which may cause end-breaks, a fairly good agreement was found between the experimental results and the Poisson (theoretical) distribution.

ASPECTS OF COUNT VARIATION. R. Fullard. Man-Made Textiles 36: 48-49, 51 (Jan. 1960). (902)

The usual practice of controlling count at the ring frame by taking samples from the production material is critically examined, and it is concluded that the control of yarn count variation at the ring frame by the means of samples is not sufficient in itself. If count variation is too high, reliable information must be obtained on the major sources of variation. The information available from routine test results is not enough, and special investigations are called for. Graphs, tables.

DOUBLE-TWIST TWISTING MACHINE FOR MEDIUM AND FINE WOOL YARNS. K. Krawany. Textil-Praxis 14, No. 9: 910-914 (1959). In German. Through BCIRA 39: 4738 (1959). (903)

The development of double-twist twisting machines for crepe and cord yarn from 1885 to date is reviewed, with special reference to the first double-twist spindle patented by F. C. Kirkmann, the Tweedales & Smalley machine equipped with spindles patented by Andrew and Langstreth, and further developments by Dunlop, Vereinigte Glanzstoff AG, Barmer Maschinenfabrik AG, Landolt & Co., Volkmann & Co., etc.

RING SPINNING WITH SUSPENDED TRAVELER IN COTTON SPINNING MILLS. STUDIES OF THE BEHAVIOR OF TRAVELERS ON UPRIGHT AND SUSPENDED RING SPINDLES. W. Frenzel and H.-J. Pursch. Faserforsch. u. Textiltech. 10, No. 8: 353-358 (1959). In German. Through BCIRA 40: 49 (1960). (904)

Comparative experiments with a suspended ring spindle (Frenzel-Wünsch patent) and a normal upright spindle are reported. The process in which the traveler is suspended on the ring may be regarded as a reversed spinning process, in which the roving passes the individual spinning machine components from the bottom to the top. The drafting system is arranged vertically and ring rail and spindle are above it. Advantages of the system are enumerated. The yarns produced in this manner were practically equivalent to those spun by the normal process. The new spinning method is particularly suitable for the production of soft-twisted fine yarns which, hitherto, have been spun on the selfactor.

RING SPINNING MACHINE OF THE PJ21 TYPE. T. Adamczewski. Przeglad Wlok. 13, No. 7: 368-370 (1959). In Polish. Through BCIRA 40: 48 (1960). (905)

A brief description is given of cotton and manmade fiber ring spinning machines produced by the Inst. of Textile Machy., Lodz.

WHITIN STANDARD SPINNING FRAME. Whitin Mach. Works. Whitin Rev. 26: 2-9 (Dec. 1959). (906)

The Whitin Standard spinning frame features 27 in. width, single balloon control ring, 45° angle roll stands, streamlined head end, and built-in waste collection system. Whitin Super-Draft and STA top arm weighting arrangement are used. Photos, diagr.

HOUGET RING SPINNING MACHINE. J. Kinapenne. Melliand 41, No. 1: 14-22 (1960). (907)

The Houget machine is equipped with a special device which separates spinning from the winding-on process, so that spinning takes place at a reduced tension and twist is inserted at the drafting gear. Diagr.

CONTINUOUS ELECTRONIC SELFACTOR. M. Gandret. Industrie Textile: 407-408 (June 1959). In French. Through BCIRA 39: 4726 (1959). (908)

This machine produced under licence by the Belgian Société d'Electricité et de Mécanique (S. E. M.) can be adapted to process carded wool, fine cotton and, in general, all staple fibers whatever their method of preparation. Drafting, twisting, and winding are carried out in a single operation. Characteristic features of the selfactor are described.

CONSTRUCTION AND MECHANISM OF DOUBLE-TWIST SPINDLES. J. Bardadin. Przeglad Wlok. 13, No. 7: 384-389 (1959). In Polish. Through BCIRA 40: 61 (1960). (909)

The mechanism and construction of double-twist twisting spindles are discussed, with reference to the problems concerning the design of the stabilizing unit for the feed bobbin, the bearing for the latter, the brake for the yarn unwinding from it, and the drawingin of the spindle. Three types of double-twist spindles (PL1, WX12, and ZP2) are described as examples.

BROKEN END COLLECTOR FOR SPINNING MACHINES. V. G. Sklizkov and R. M. Valyaev. Tekstil. Prom. 19, No. 8: 69-70 (1959). In Russian. Through BCIRA 40: 51 (1960). (910)

A new device is illustrated, and its mechanism described. It is claimed that this device is able to remove the broken ends with an efficiency of almost 100%.

SPINDLES WITH PURE OIL-HYDRAULIC SHOCK ABSORPTION. G. Wendel. Textil-Praxis 14, No. 9: 893-894 (1959). In German. Through BCIRA 39: 4727 (1959). (911)

Various types of bearing tubes (developed by SKF Kugellagerfabriken) are described and illustrated. It is claimed that spindles for speeds up to 20,000 rev/min can be made, and that ring spinning efficiency is now dependent on traveler speed.

DETERMINATION OF THE CRITICAL SPEED OF CENTRIFUGAL SPINNING SPINDLES. T. Rumowski. Przeglad Wlok. 13, No. 7: 338-340 (1959). In Polish. Through BCIRA 40: 52 (1960). (912)

Advantages and disadvantages of centrifugal spinning spindles and the simplest methods for calculating their critical angular velocities are discussed.

EFFECT ON THE COMMERCIAL PMR OF THE COUNT VARIATIONS BETWEEN SPINNING MACHINES. C. Pujol. Ingenieria Textil No. 139: 291-299 (July/Aug. 1959). In Spanish. Through BCIRA 39: 4731 (1959). (913)

It is shown that the increased commercial PMR (percentage mean range) as compared with the value determined by the spinner for each yarn batch, is a function of the PMR of the production and the variations between individual machines; these variations can be reduced by statistical control.

FALSE TWIST AT HIGH SPEED: EP 1 FRICTION TWIST MACHINE FOR NYLON YARNS. D. F. Arthur. Nylon Outlook 2, No. 7: 4-9 (Winter 1959/60). (914)

The EP 1 machine utilizes the basic layout of a doubler and two yarns are simultaneously processed to opposite twists through the same heater and are wound together using a ring and traveler. In this way a separate doubling operation is rendered unnecessary, and the yarn may be coned direct from the machine takeup package. Photos, diagrs, graphs, tables.

STUDY ON THE TWIST OF CREPE YARNS. PART 2. MECHANISM OF RUPTURE OF SINGLE FILAMENTS DUE TO TWISTING. S. Kakiage. J. Textile Machy. Soc. Japan 12, No. 10: 10-15 (1959). In Japanese (English summary). Through BCIRA 39: 4862 (1959). (915)

The following, separately or in combination, occur: (1) surface rupture by shearing force in a direction normal to the filaments, (2) cleavage along the twist line, (3) surface rupture in a direction perpendicular to the twist line caused by shrinkage, (4) a conical surface of filaments constituting the bundle.

WHITIN PACEMAKER P3 RING TWISTER. Whitin Mach. Works. Whitin Rev. 26: 34-42 (Dec. 1959). (916)

Machine details are given. Photos, diagr.

EASY WAY TO CONTROL VARIATION IN TWISTER TENSION. D. H. Denholm and J. C. Smith, Jr. (Chase Bag Co.). Textile World 110: 58-59 (Feb. 1960). (917)

The calculation of control limits for twister tension by translating actual tension measurements into standard deviation from the mean and plotting the results as a bell-shape curve is explained.

RING TWISTER PL 14. J. Ruszczyński. Przeglad Wlok. 13, No. 13: 373-375 (1959). In Polish. Through BCIRA 40: 59 (1960). (918)

The model described is designed for cotton or wool.

WHITIN NARROW FRAME. Whitin Mach. Works. Am. Textile Reptr. 74: 14, 35 (Feb. 4, 1960). (919)

Features of the Whitin Standard 27-in. frame include single balloon control rings, vacuum collection system, and 45 degree angle adjustable roll stands.

Yarns B5

INVESTIGATIONS INTO THE FATIGUE BEHAVIOR OF TIRE CORD. H. Müller. Faserforsch. u. Textiltech. 10, No. 9: 438-444 (1959). In German. Through BCIRA 40: 193 (1960). (920)

A fatigue tester for tire cord described in the literature was used in the author's own experiments on viscose filaments Nm 6.5/1/3 with 4 different twists. The results are in good agreement with those obtained on the cord-testing frame. The optimum fatigue resistance in the finished yarn lies, according to the Goodrich test, at a gradient angle of between 45 and 50°.

CHARACTERISTICS AND PERFORMANCE OF RAYON TIRE CORDS. M. W. Wilson. Tappi 43: 129-138 (Feb. 1960). (921)

Rayon tire cord characteristics observable in the laboratory are discussed and related to tire performance. Effects of improving tensile strength are considered and the methods of measuring fatigue resistance are reviewed. Particular attention is given to the characteristics that are related to the interaction of rayon tire cords with water. Shrinkage, penetration by adhesive, effect of wetting on tensile strength, elongation, and resiliency are covered. Factors involved in improving cord tensile strength and resiliency are examined. Considerable attention is paid to all factors affecting adhesion, and a mechanism of resorcinol-formaldehyde-latex adhesion is presented. Photos, graphs, tables, 9 refs.

STRESS TEMPERATURE BEHAVIOR OF NYLON 6 FILAMENT YARN AT CONSTANT EXTENSION. I. Tsujimoto and N. Motoji. J. Textile Machy. Soc. Japan 12, No. 10: 16-21 (1959). In Japanese (English summary). Through BCIRA 39: 4865 (1959). (922)

The tensile stress relaxes with rise in temperature and, in the cooling process, decreases with fall in temperature. At lower extensions the effects of the amorphous regions dominate the stress-relaxation, at higher extensions the effects of the crystalline regions dominate.

BULKED YARN TRADE GUIDE 1960. Skinner's Silk & Rayon Record 34: 128-131 (Feb. 1960). (923)

STRESSES IN DEFLECTED TIRES. W. F. Ames and H. G. Lauterbach. Proc. Intern. Rubber Conf., Wash., Nov. 1959, p. 50-56. (924)

This paper considers the problem of stress distribution in the cord body of an inflated, deflected tire by the use of the membrane theory.

BULKED YARNS FOR 1960. Skinner's Silk & Rayon Record 34: 21-33 (Jan. 1960). (925)

Major developments in the bulk yarn trade are surveyed. Fabric swatches are included.

DEVELOPMENTS IN THE MANUFACTURE OF SPECIAL YARNS BASED ON SYNTHETIC FILAMENTS OR FIBERS. Bull. Inst. Textile France No. 82: 113-125 (June 1959). In French. Through BCIRA 39: 4735 (1959). (926)

Processes used in the production of core yarns, bulked yarns from fiber blends, and cellular (foam) yarns are reviewed. 28 refs.

EXAMINATION OF THE POLYAMIDE MIRAMIDE PLASTIC FOR PIRN TUBES. K. H. Banke and H. Zeitler. Deut. Textiltech. 9, No. 7: 381-382 (1959). In German. Through BCIRA 39: 4745 (1959). (927)

The development of pirn tubes for spindleless automatic winders, by using as constructional material Miramide plastics to replace wood and eliminate wear, is described. However, the resistance of the tube to bending stresses occurring during the winding process was found to be too low, and the tube is suitable only conditionally up to a maximum speed range of 4,500 min^{-1}.

FABRIC PRODUCTION C

Warping, slashing, yarn preparation C1

ORGON STARCHES FOR SIZING AND FINISHING OF FABRICS. Industrie Textile: 682 (Oct. 1959). In French. Through BCIRA 39: 4746 (1959). (928)

New special starch products for sizing cotton, spun-rayon, and synthetic fibers have been introduced on the market under the name of Orgon (Soc. des Produits du Mais). The preparation of the size requires no special boilers, the products do not gel when cold, and are not degraded even at low temperatures, their films are strong and flexible and insensitive to changes in relative humidity, they can be removed without enzyme treatment, and may be combined with polyvinyl resins.

NEW USES FOR UNIFIL LOOM WINDER. Leesona Corp. Modern Textiles Mag. 41: 42-44, 63 (Feb. 1960). (929)

The use of Unifil winders for novelty fabrics and their application to a growing number of loom types are discussed.

NEW SIZING AGENTS AND DETERGENTS. P. Y. Mukhanov. Tekstil. Prom. 19, No. 8: 76-79 (1959). In Russian. Through BCIRA 40: 83 (1960). (930)

The preparation, uses, properties, and advantages of carboxymethyl cellulose, sulfite cellulose extract, and sulfonated fatty acids are described.

COTTON AND RAYON SIZING MACHINES. A. Gasser. Textil-Praxis 14, No. 9: 915-917 (1959). In German. Through BCIRA 39: 4747 (1959). (931)

New automatic sizing machines are described and illustrated. The author refers in particular to a newly developed Rüti rayon sizing machine, shown at the exhibition in Milan, but not yet on the market, which does not require a dryer or drying cylinders, and therefore occupies only a very small floor space. The size is fed from a container in which it is melted without addition of water, so that fiber swelling is prevented. The fiber elongation is very small and the warp is consequently subjected to a very gentle treatment.

ELECTRONIC VISCOMETER 57-P. M. P. Surovyagina. Tekstil. Prom. 19, No. 8: 48-50 (1959). In Russian. Through BCIRA 40: 86 (1960). (932)

The described and illustrated apparatus, EVI-57-P, is used for periodical viscosity control of sizes and thickeners in weaving and finishing plants. The reproducibility of the reading for sizes prepared from different starches, with different concentrations, at a viscosity used in production, is within the limits of $\pm$ 0.5 to $\pm$ 1.5%. This accuracy is sufficient for practical purposes. The device is convenient to use, and a single viscosity measurement does not take more than 5-6 sec.

POLYVINYL ACETATE TYPE RESINS IN SIZING. Fibres and Plastics 21: 25 (Jan. 1960). (933)

Bevaloid 170 Bead, a copolymer of vinyl acetate with small amounts of acid monomers, has virtually the same properties as polyvinyl acetate but can be dissolved in water with the aid of alkali. It gives durable coatings of high water resistance, good flexibility, good strength, and high abrasion resistance.

LACK OF A THIRD METHOD OF WARP PREPARATION. M. Paul. Melliand Textilber. 40, No. 11: 1263-1265 (1959). In German. Through BCIRA 40: 82 (1960). (934)

The difficulties encountered in the preparation of closely set warps are discussed, and a new method is described, which consists in beamless warping of several warps on top of each other. The economic advantages of this method are enumerated.

IMPROVED UNWINDING CONDITIONS ON THE CHEESE WINDING MACHINE. S. Bache. Deut. Textiltech. 9, No. 7: 359-361 (1959). In German. Through BCIRA 39: 4742 (1959). (935)

The effect of unwinding accelerators on the thread tension during rewinding was examined, and it was found that their use decreases the thread tension (especially when the cop is almost full) by up to 50% and, consequently, reduces the number of end breaks. The lower thread tension should affect the elasticity of the yarn less than during winding without unwinding accelerator, and a reduction in the amount of waste may be expected.

IMPROVING CHEESE WINDING. O. Kaspar. Textil 14, No. 9: 328-331 (1959). In Czech. Through BCIRA 39: 4743 (1959). (936)

Reference is made to the Totex type 2000 machine which makes it possible to effect winding at higher velocities without impairing the strength of the yarn.

NEW LEASING SYSTEM, TYPE ZUA, FOR WARPING MACHINES OF THE MASCHINENFABRIK BENNINGER AG, UZWIL. R. Stöck. Melliand Textilber. 40, No. 11: 1266-1271 (1959). In German. Through BCIRA 40: 81 (1960). (937)

Conventional leasing systems are mentioned, and the new ZUA-system and its advantages are described and compared with previous constructions.

TIME PREDICTION NOMOGRAM FOR THE WARP WINDING ROOM. H. Petzold. Reyon Zellwolle Chemiefasern 9, No. 10: 664-667 (1959). In German. Through BCIRA 40: 80 (1960). (938)

In order to calculate accurately the wages in the warp winding room, time studies were made for a prolonged time, taking into account each yarn count and 10 working stages.

BROKEN ENDS MADE ACCESSIBLE DURING WINDING. L. Pailleron. Industrie Textile: 433-434 (June 1959). In French. Through BCIRA 39: 4744 (1959). (939)

A device is described which, when a thread is weakened by being accidentally subjected to excessive tension, ensures cutting of this thread at a predetermined point sufficiently remote from the machine, so that the broken end does not enter the machine but remains accessible for being pieced.

ROCKET WINDER. D. Delerue & Cie. Hosiery Times 33: 54-55 (Feb. 1960). (940)

The winder described produces giant-size packages (5-3/4 in. diameter and 29-1/2 in. long) for use in dyeing and as supply packages in warping, winding, knitting, etc. Photos.

Weaving C2

GAGES IN DRAPER LOOM MAINTENANCE. PART 2. INFLUENCE OF BAD ALIGNMENT ON SHUTTLE WEAR. Textile Inds. 124: 128-131 (Feb. 1960). (941)

The causes of abnormal shuttle wear traceable to poor lay alignment are noted, and routine corrective steps are presented. Photos, diagr.

EXPERIENCES IN THE CONSTRUCTION AND OPERATION OF CZECHOSLOVAKIAN WATER-JET LOOMS. M. Havlicek. Textil 14, No. 10: 375-378 (1959). In Czech. Through BCIRA 40: 91 (1960). (942)

The economic advantages of water-jet looms for weaving polyamide fabrics are discussed, with reference to the manufacture, productivity of the loom (as compared with the Benninger automatic loom), costs, waste, and quality of the fabric.

WIDTH VARIATIONS OF THE FABRIC ON THE LOOM. E. O. Hesse. Spinner u. Weber 77, No. 18: 1109-1112 (1959). In German. Through BCIRA 39: 4755 (1959). (943)

The effects of the material, warp preparation, weft pirns, shuttles and weft tension, loom, and workroom conditioning on width variations of the fabric on the loom (using the same type of loom) are discussed with a view to eliminating the variations due to the weaving process.

PROBLEMS OF SHUTTLELESS LOOMS. V. Svaty. Textil 14, No. 10: 369-374 (1959). In Czech. Through BCIRA 40: 90 (1960). (944)

The mechanisms of water- and air-jet shuttleless looms and of the Sulzer weaving machine are described and compared.

HIGH SPEED AUTOMATIC LOOM MODEL 4200 TES. C. Weise. Deut. Textiltech. 9, No. 8: 409-411 (1959). In German. Through BCIRA 40: 89 (1960). (945)

The loom, constructed by VEB Webstuhlbau, is used for light- and medium-weight fabrics at a relatively high speed (240 picks/min at a working width of 110 cm). Its constructional details and its mechanism are described.

IDEAS UNDERLYING LOOM PATENTS. PART 7. R. Rossmann. Textil-Praxis 14, No. 10: 1020-1024 (1959). In German. Through BCIRA 39: 4748 (1959). (946)

Eighteen more German patents on circular looms are described and their construction criticized.

KEYBOARD PATTERN LOOM. H. Winkler. Melliand Textilber. 40, No. 10: 1164-1166 (1959). In German. Through BCIRA 39: 4751 (1959). (947)

The loom is described with special reference to the preparation of the warp and weft material, the preparation and operation of the loom, and the weaving and making-up of patterns. The system is compared with the production of patterns on pick-and-pick looms.

CONSTRUCTIONAL IMPROVEMENTS OF THE LOOM ES II TO REDUCE WARP BREAKAGES. H. Uhmann. Textil 14, No. 9: 332-335 (1959). In Czech. Through BCIRA 39: 4750 (1959). (948)

LOOM PRODUCTION IN CZECHOSLOVAKIA. O. Talavasek. Textil 14, No. 8: 289-292 (1959). In Czech. Through BCIRA 39: 4749 (1959). (949)

Constructional details are given of new Czechoslovakian looms, some of which were exhibited at the Sample Fair in Brno.

WEAVING WITH THE GRIPPER SHUTTLE LOOM. M. Steiner. Textile Recorder 77: 57-59 (Feb. 1960). (950)

The scope of the Sulzer loom is discussed in relation to certain features of design on the basis of operating experience gained over 7 years. Photo, diagrs, table.

LOOMFIXER AND HIS JOB. PART 15. W. Westbrook. Textile Bull. 86: 69 (Feb. 1960). (951)

Maintenance procedures for the loom protector motion are described. Diagrs.

PROTECTIVE DEVICES FOR AUTOMATIC LOOMS. L. V. Zavakin. Tekstil. Prom. 19, No. 8: 32-36 (1959). In Russian. Through BCIRA 40: 97 (1960). (952)

Three devices, designed to cut and remove weft ends, are described and illustrated; their application leads to a higher quality of fabric. Results obtained on looms with and without these devices are compared.

ANALYSIS OF DRIVING MOMENT VARIATIONS OF THE LAY. L. Korycki. Przeglad Wlok. 13, No. 7: 340-343 (1959). In Polish. Through BCIRA 40: 94 (1960). (953)

It is shown that the power-load variations are caused by changes in the kinetic and potential energy of the lay during one full revolution of the crank shaft. A formula is derived for calculating the maximum and minimum power load and applied to a typical axial loom.

STUDY OF NEW WEAVING TECHNIQUES. C. Danoint. Industrie Textile: 685-687 (Oct. 1959). In French. Through BCIRA 39: 4752 (1959). (954)

Means are described which separate the process of weft insertion from the movement of the lay; i.e. the reed for beating up the weft is no longer supported by the lay but is independently operated by special driving means which displace the reed after each movement of the shuttle. It is introduced between the warp threads at a point situated behind the last inserted weft so as to beat up the weft against the fabric already formed. The mechanical components forming the lay in the classical constructions (the shuttle race and the two shuttle boxes with their accessories) remain in a fixed position.

AUTOMATIC PIRN-WINDER. U. Kühn. Melliand 41, No. 1: 22-28 (1960). (955)

Automatic weft winding systems, combining pirn winding and battery loading for automatic looms, are reviewed.

BOBBIN CHANGE MOTION IN AUTOMATIC LOOMS FOR COLORED COTTON WEAVING MODEL ES IV B. L. Heeg and H. Mzyk. Deut. Textiltech. 9, No. 8: 411-417 (1959). In German. Through BCIRA 40: 96 (1960). (956)

After reviewing the state of technology relating to automatic weft replenishing on automatic looms for colored weaving, the authors investigate theoretically the mechanism of the bobbin changing device on the automatic loom Model ES IV B (constructed by VEB Webstuhlbau Neugersdorf).

SUPPLY OF WEFT YARN TO AUTOMATIC LOOMS. V. Luzet. Reyon Zellwolle Chemiefasern 9, No. 10: 660-664 (1959). In German. Through BCIRA 40: 99 (1960). (957)

A study is made to determine the optimum number of looms to be attended by a pirn distributor so as to ensure good working conditions and to prevent interruptions in loom operation on account of delayed pirn supply.

STEEL WIRE HEDDLES. T. Stevens. Melliand 41, No. 1: 28, 30 (1960). (958)

The development of the various types of steel wire heddles currently used is traced.

SHUTTLE TRUEING MACHINE. Spinner u. Weber 77: 1386-1387 (1959). In German. Through BCIRA 40: 98 (1960). (959)

The small machine, described and illustrated, is supplied in three sizes: CI, CII, and CIII, for shuttles of 50 mm, 65 mm, and over 65 mm width, respectively.

Knitting C3

PATTERN SCOPE OF WARP KNITTING EQUIPMENT. PART 14. A. Reisfeld. Knitted Outerwear Times 28: 11-15 (Feb. 15, 1960). (960)

The development and practical aspects of geometric and fancy color designs in warp knit fabrics.

FUNDAMENTAL STRUCTURE OF KNITTED FABRICS. KNITTING: SCIENCE OR ART? D. L. Munden (Leeds Univ.). Hosiery Times 33: 29-32, 37-39, 64 (Feb. 1960). (961)

The importance of stitch length as a factor in knit fabric structure is discussed. Photos, graphs, 7 refs.

TENSILE BEHAVIOR OF SEAMS IN KNIT FABRICS. S. Lundgren. Medd. TEFO No. 12: 1-10 (1959). In Swedish (English summary). Through BCIRA 39: 4871 (1959). (962)

Different types of seam, flat and overedge, were compared by grab tests on an Instron machine.

GEOMETRY OF WARP-KNITTED FABRICS. P. Grosberg (Leeds Univ.). J. Textile Inst. 51: T39-T48 (Jan. 1960). (963)

By constructing a simplified physical model, the geometrical relationships that exist in an unfinished 2-bar warp-knitted fabric are determined. Hence, a method for calculating the run-in from the course-wale spacing of a fabric in the loom state and the denier of the yarn is deduced. It is further shown how to calculate the run-in for the different geometry of relaxed fabrics. Diagrs, graphs, tables, 5 refs.

INFLUENCE OF THE SPINNER ON THE DESIGN AND STYLE OF KNITTED OUTERWEAR. D. N. Leplar (Marks & Spencer Ltd). Textile Recorder 77: 60-62 (Feb. 1960). (964)

Recent trends and developments in yarns for the knitted outerwear trade are outlined and characteristics required in yarns intended for this use are indicated. Future developments in this field are also suggested.

PRODUCTION AND PROPERTIES OF HALF AND FULL-CARDIGAN STITCH. J. B. Lancashire. Knitted Outerwear Times 28: 5, 45 (Feb. 22, 1960). (965)

ANOTHER WAY TO SPEED KOMET CLUTCH ADJUSTMENT. K. O. Metz. Textile Inds. 124: 175, 177 (Feb. 1960). (966)

The use of an adjustable connecting link on old model clutch assemblies is explained.

Fabrics C4

WASH-AND-HANG CURTAIN FABRICS. Consumer Repts. 25: 76-77 (Feb. 1960). (967)

Dacron, Fiberglas, nylon, and resin-finished rayon sheer wash-and-hang curtains were given laundering and accelerated aging tests. The Dacron curtains were the most satisfactory. The advantages and disadvantages of the different fibers are discussed.

DESIGNING OF PILE FABRICS. PART 3. E. B. Berry. Textile Bull. 86: 49-53 (Feb. 1960). (968)

The weaving, finishing, end uses, and method of analyzing velour fabrics are described.

AUTO SEAT BELTS. Consumer Repts. 25: 82-87 (Feb. 1960). (969)

Only 9 of 41 brands passed performance tests based on Federal specifications.

METHODS TO IMPROVE RESILIENCE OF COTTON PILE YARNS IN SOFT FLOOR COVERINGS. E. Abrams, H. Cox, and G. Milner (So. Research Inst.). Am. Dyestuff Reptr. 49: 34-39 (Jan. 25, 1960). (970)

Various formulations of synthetic latex and dimethylol cyclic ethylene urea (DMEU) resin were applied to cotton carpet yarns prior to the construction of carpets. An improvement in compressional resilience was obtained with a 60/40 mixture of a butadiene-high acrylonitrile latex and DMEU resin. Tables, 4 refs.

LOOM AND RING TRAVELER LUBRICANTS REMOVABLE BY WASHING. PART 2. M. Kehren and H. Hendrix. Melliand Textilber. 40, No. 10: 1183-1186 (1959). In German. Through BCIRA 39: 4887 (1959). (971)

A study of the behavior of pure mineral oil stains in fabric when treated with various detergents (Levapon T, Supralan M, Hostapel W) is followed by a discussion of the factors influencing the removal of loom oil stains after aging. The results of the experiments show that in practice the mineral oil and admixtures of loom lubricants based on oils and fats can be removed with highly active detergents in the usual way; dark colored pigment soil, however; is expected to remain, especially if it is fixed in the fiber. (See also abstr. 2524/59).

HOW TO REMOVE SPOTS ON PIECE GOODS. W. Frederick. Textile World 110: 105 (Feb. 1960). (972)

BLACK SPOTS ON COTTON FABRICS DUE TO THE PRESENCE IN RAW COTTON OF A MICROSCOPIC FUNGUS. R. Schneider. Bull. Inst. Textile France No. 82: 105-110 (June 1959). In French. Through BCIRA 39: 4866 (1959). (973)

Causes of black spots on cotton fabric are discussed, with reference to a particular type that cannot be removed by bleaching and is caused by the presence in raw cotton of an agglomerate of filaments and spores of black fungi (probably Diplodia, a species which is generally responsible for the occurrence of boll rot).

THE TEXTILE LABELING ACT GOES INTO EFFECT. Consumer Repts. 25: 148-151 (Mar. 1960). (974)

What it will and will not do for consumers.

PRODUCTION AND APPLICABILITY OF CONTINUOUSLY WOVEN TEXTILE DRIVING BELTING. D. Seifert. Deut. Textiltech. 9, No. 7: 365-367 (1959). In German. Through BCIRA 39: 4757 (1959). (975)

Raw materials and yarns used, the production of endless belts on hand-looms as well as on mechanical looms, aftertreatment of the belts, and the strength of belts from cotton, viscose staple, viscose rayon cord, and Perlon cord are discussed.

MICROSCOPICAL AND MICROCHEMICAL CONTRIBUTIONS TO THE PROBLEM OF BLACK SPECKS. PART 3. RUBBER SPECKS IN RAW COTTON AND COTTON GOODS. H. Reumuth. Textil-Praxis 14, No. 10: 997-1000 (1959). In German. Through BCIRA 39: 4867 (1959). (976)

Black specks in raw cotton obtained from mills have been isolated and analyzed by various methods. Parallel tests have been made with dust particles picked up in the street. In both cases the black specks were identified as abrasion products of rubber tires. (See also abstr. 3740/59).

FELTING OF WOOL IN CONCENTRATED SOLUTIONS OF ELECTROLYTES. D. R. Graham and K. W. Statham (Abbey Meadow Mills). (Letter to the editor). Textile Research J. 30: 151-152 (Feb. 1960). (977)

An investigation of the felting of wool in calcium chloride and zinc sulfate solutions of various concentrations supports the view that felting is reduced when the water content of the solution is reduced. Graphs, table, 5 refs.

CONSUMERS' REACTION TO WASH-AND-WEAR. G. M. Smith (Sears, Roebuck & Co.). Am. Dyestuff Reptr. 49: P44-P47 (Jan. 25, 1960). (978)

Among consumer complaints are these: the garments do not stand up to the claims made for them; some whites retain chlorine, becoming yellow and/or tender after laundering; soil is hard to remove; fabrics tear and wear out easily; the finish washes out; puckering at seams gives garments a poor appearance, particularly after they are laundered.

MEN'S WASH-AND-WEAR DRESS SHIRTS. Consumer Repts. 25: 122-125 (Mar. 1960). (979)

Eighteen models of white resin-finished cotton-broadcloth shirts were use-tested and rated for (1) need for ironing, (2) durability, and (3) whiteness. Photos.

THEORY AND PRACTICE OF BLENDING WOOL AND CHEMICAL FIBERS. PART 4. EFFECT OF THE MIXING RATIO ON THE CREASE RECOVERY OF WOOL/SPUN RAYON FABRIC BLENDS. J. B. Cirlic. Faserforsch. u. Textiltech. 10, No. 9: 429-437 (1959). In German. Through BCIRA 40: 207 (1960). (980)

The relationship between the mixing ratio in wool/spun rayon fabrics and the time-dependent crease recovery of these fabrics is investigated, and an attempt is also made to elucidate some problems associated with testing, and evaluating the crease recovery measurements.

GENERAL THEORY ON THE WEAR RESISTANCE OF FABRICS. A. Parisot. Teintex 24, No. 10: 689-713 (1959). In French. Through BCIRA 39: 4876 (1959). (981)

In this review, the author discusses the general theory of wear (the properties required from a fabric, general behavior of the fabric during wear, the mechanical and chemical forces, and combination of mechanical and chemical wear). This theory is applied to the special cases of cotton and linen, and the resistance of fabrics from natural cellulosic fibers is compared. Reference is also made to the problem of evaluating the wear of underwear and predicting the life time of articles which are to be frequently bleached. 12 refs.

EFFECTS OF FINENESS AND STAPLE LENGTH OF VISCOSE FIBERS ON SOME PROPERTIES OF FABRIC PRODUCED FROM THEM. S. Ploch. Deut. Textiltech. 9, No. 10: 528-533 (1959). In German. Through BCIRA 40: 204 (1960). (982)

Experiments have been carried out to study the effects of strength, staple length, degree of twist and yarn count on the fabric properties from spun rayon yarn. It has been found that by using a suitable twist the crease recovery angle and percentage shrinkage can be improved without impairing other properties. The relationships between breaking load, or elongation at break, and yarn count, fiber fineness, and staple length, respectively, and between the crease recovery angle and twist (warp), fiber fineness, and the above mentioned parameters, are presented in graphs. Some practical recommendations are made.

THERMAL UNDERWEAR. Consumer Repts. 25: 37-38 (Jan. 1960). (983)

Thermal-knit underwear is compared with 3 other types of cold-weather underwear (quilted, Brynje or mesh, and conventional-knit) for warmth, shrinkage, styling and comfort, and price.

IMPORTANCE OF THE PHYSIOLOGICAL BEHAVIOR TO HUMIDITY OF TEXTILE FIBERS IN GARMENTS. F. W. Behmann and H. D. Meissner. Melliand Textilber. 40, No. 10: 1209-1214 (1959). In German. Through BCIRA 39: 4882 (1959). (984)

Experiments based on several methods of testing the physiological behavior of garments are used to show that the insulation value of garments under the influence of perspiration depends largely on the fiber properties and could be adjusted to the physiological needs by selecting a suitable wettability and hygroscopic saturation humidity of the garment. (See also abstr. 4514/58).

COTTON QUALITY STUDY. PART 4. RESISTANCE TO WEATHERING. J. W. Howard and F. A. McCord (Nat. Cotton Coun. Am.). Textile Research J. 30: 75-117 (Feb. 1960). (985)

This report points out where and to what extent the need and opportunity exists for improving cotton's weather resistance. Its purpose is to stimulate research by reviewing and condensing technical knowledge in the field, and by suggesting new approaches for further study. Photos, photomicrographs, diagr, graphs, tables, 352 refs.

EFFECT OF SOLAR RADIATION ON THE BREAKING STRENGTH OF OUTDOOR EXPOSED WEBBINGS. R. A. Wilkinson. Wright Air Development Center, Air Research & Development Command, Wright-Patterson Air Force Base, Ohio. Nov. 1958. 29 p. WADC technical report no. 58-201. PB 151 590. Available from Office of Technical Services, Washington 25, D. C. $1.50. (986)

Four groups of webbings (as used in aircraft runway barriers) were evaluated for breaking strength after being exposed to natural weather for specific time intervals encompassing one year in Ohio, New Mexico, and Alaska. Data obtained indicate that the service life of the present type of runway barriers can be increased to 180 days in areas of extremely strong sunlight and to 360 days in areas of moderate or small amounts of sunlight by: (1) using 260 denier 17 filament, type 300, OD color nylon yarn, or (2) using type 330 nylon yarn in the manufacture of the webbing.

EFFECT OF SOME TITANIUM WHITE PIGMENTS ON OUTDOOR COTTON DUCK. R. J. Brysson, W. A. Reeves, and E. L. Patton (So. Reg. Research Lab.). Canvas Products Rev. 35: 46-47, 51 (Feb. 1960). (987)

The phenomenon of tendering of fabrics treated with titanium pigments is closely related to the chalking of titanium dioxide containing paint films and wherever it is desired to use white pigments in contact with cotton fabric, the chalk resistant modification of rutile titanium dioxide should be specified.

KNIT CLOTH LAMINATED TO URETHANE FOAM. C. Reichman. Knitted Outerwear Times 28: 3, 5 (Feb. 8, 1960). (988)

FAILURE OF FOAMED ELASTIC MATERIALS. A. N. Gent and A. G. Thomas (Brit. Rubber Producers' Research Assoc.). J. Appl. Polymer Sci. 2: 354-357 (Nov./Dec. 1959). (989)

A theoretical treatment is given which predicts the tear strength of a foamed elastic material. Uniformity of pore size is required for maximum strength, and a large average pore size for high tear resistance. Tables, 4 refs.

FINISHING D

CONTINUOUS OPEN-WIDTH DYEING AND BLEACHING OF CELLULOSIC FABRICS IN A SINGLE INSTALLATION. G. Bergui. Tinctoria 56, No. 9: 64-68 (1959). In Italian. Through BCIRA 39: 4781 (1959). (990)

A small plant, requiring small installation costs and adapted for small and medium enterprises, is proposed. This installation is suitable for continuous open-width dyeing and semi-continuous open-width bleaching at a rate of 30-35 m/min. Pad-dyeing with substantive dyes and pad-steam dyeing are discussed, and some practical recipes are given for use in the new installation.

PROGRESS AND DEVELOPMENT IN THE CONSTRUCTION OF MACHINERY FOR DYEING AND FINISHING TEXTILES. E. Pinter. Tinctoria 56, No. 9: 51-59 (1959). In Italian. Through BCIRA 39: 4779 (1959). (991)

The main problems encountered in dyeing and finishing of yarns and fabrics are examined, with special reference to bleaching with sodium chlorite and hydrogen peroxide, dyeing on the padder and jig, rope and open-width washing, and drying on tenters. Methods of dyeing yarns under pressure and rapid bobbin-drying systems are discussed, and data are given relating to the power consumption and efficiency of modern machines as compared with those built before the war.

FINISHING PROCESSES USING MONFORTS REACTOR. H. Bonanni. Z. ges. Textil-Ind. 61, No. 19: 758-761 (1959). In German. Through BCIRA 39: 4780 (1959). (992)

The individual components of the Monforts reactor are described, and directions are given for the following processes which can be carried out in practice by using this machine: desizing; Indanthrene-print development by the 2-phase method; Indanthrene-pigment development on padded fabric; Hydrazone Blue dyeings; Anthrasol and Indigosol dyeings; substantive dyeings; Naphthol groundings; dyeings with disperse dyes on acetate. For previous part see abstr. 470/59.

FINISHING OF FABRICS WOVEN ON SULZER LOOMS. O. Innemann. Textil-Praxis 14, No. 10: 1025-1028 (1959). In German. Through BCIRA 39: 4773 (1959). (993)

Reference is made to shearing, bleaching, dyeing, drying, Sanforizing, and calendering of fabrics obtained on the Sulzer loom and their behavior during these processes.

Chemical processes D1

TCEP FIRE RETARDANT PLASTICIZER. J. R. M. Johnston. Plastics 24: 459-460 (Nov. 1959). Through BCIRA 40: 153 (1960). (994)

Applications of trichloroethylphosphate (TCEP), as a fire retardant plasticizer for a wide range of plastics, are briefly reviewed.

FLAMEPROOFING FINISHES. E. Atlung. Tidsskr. Textiltek. 17, No. 11: 193-197 (1959). In Danish. Through BCIRA 40: 152 (1960). (995)

Flammability of various fibers, the theory of flameproofing, and flameproofing agents (inorganic and organic) are discussed.

SHRINK RESIST FINISHES FOR WOOL: ALKALINE PROCESSES. A. J. Hall. Wool Rev. 33: 33, 35, 48 (Jan. 1960). (996)

A review. 6 refs.

CHEMICAL SHRINKAGE OF FABRICS. V. Bird. Fibres and Plastics 21: 5-6, 24 (Jan. 1960). (997)

The physical and mechanical aspects (e.g. impregnation, drying, calendering, and tentering) which enter into the resin finishing process for fabric shrinkproofing are discussed, with particular emphasis on their effects on shrink resistance.

SHRINKPROOFING OF WOOL WITH POLYGLYCINE FROM THE POLYMERIZATION OF THIAZOLID-2:5-DIONE. J. H. Bradbury and J. D. Leeder (Wool Research Labs., CSIRO, Australia). Textile Research J. 30: 118-127 (Feb. 1960). (998)

Shrinkproofing of wool with thiazolid-2:5-dione is not possible from aqueous solution but can be obtained from a range of organic solvents of low water affinity at temperatures > 40°. The abrasion resistance of treated fabric is about 1.5-2 times that of untreated fabric, but cost of treatment would be prohibitive in practice. Descaling shows that most of the polyglycine is located in the scales; a thin surface layer can be seen under the electron microscope. Graphs, tables, 30 refs.

PROGRESS IN THE FIELD OF HANK YARN MERCERIZATION. R. B. Vogel and H. Hölters. Textil-Praxis 14, No. 9: 937-942 (1959). In German. Through BCIRA 39: 4803 (1959). (999)

A new automatic machine (MV 56) has been developed by Maschinenfabrik Gerber. The hanks are not immersed; the lye is sprayed. Mercerization times are reduced by as much as 40%, and a satisfactory result is obtained even with hard twisted ply yarns in a single operation. The machine is illustrated, and the experimental results evaluated.

SHRINKPROOFING TEXTILES WITH POLYAMIDES. W. C. J. Trusselle (Cray Valley Products Ltd). Fibres and Plastics 21: 12-13 (Jan. 1960). (1000)

The recently developed method (USP 2 890 097) for shrinkproofing textiles by impregnation with a polyamide followed by subsequent curing with a polyepoxide is described. 3 refs.

FOR RAINWEAR: A NEW DURABLE WATER-REPELLENT FINISH. C. G. DeMarco, A. J. McQuade, and S. J. Kennedy (U.S. Quartermaster Corps). Modern Textiles Mag. 41: 50-56 (Feb. 1960). (1001)

Following a discussion of the various types of water repellent finishes and the test methods used to evaluate the water resistance of fabrics, the performance of Quarpel (a combination application of a pyridinium repellent with a fluorocarbon) and its effect on fabric properties is compared with other commercially available repellents. Tables.

NEW HORIZONS IN MULTI-PURPOSE FINISHES FOR MILITARY CLOTHING. C. G. DeMarco, A. J. McQuade, and S. J. Kennedy (U.S. Quartermaster Research & Eng. Command). Can. Textile J. 77: 45-52 (Jan. 22, 1960). (1002)

The performance of Quarpel, a durable water- and oil-resistant finish for textiles, is compared with that of commercially available pyridinium and fluorocarbon repellents. Tables.

WATER-REPELLENT TREATMENT OF TEXTILES WITH SILICONES: STUDIES ON THE MECHANISM OF GELLING-TYPE PROCESSES. J. A. C. Watt (Imp. Chem. Inds. Ltd). J. Textile Inst. 51: T1-T16 (Jan. 1960). (1003)

From the experimental results reported, it is concluded that the gelling of polymethylsiloxane fluids with stannous, zinc, or lead salts of organic fatty acids which occurs during the water-repellency treatment of textiles proceeds by means of base-catalyzed hydrolysis, in which the partially hydrolyzed metal salt acts as base. The practical implications of these observations are discussed with reference to experimental work involving treatment of cloth. Diagr, graphs, tables, 20 refs.

LABELING OF THE CLEANING ABILITY OF TEXTILES. O. Viertel. SVF Fachorgan Textilveredlung 14, No. 10: 684-690 (1959). In German. Through BCIRA 40: 210 (1960). (1004)

Symbols proposed in France, Belgium, Switzerland, and Holland for labels indicating the treatments to which individual textiles can be subjected during washing, ironing, and drycleaning are shown and discussed.

NEW METHODS FOR THE MODIFICATION OF THE PROPERTIES OF CELLULOSE. Z. A. Rogovin. Uspekhi Khimii 28, No. 7: 850-876 (July 1959). In Russian. Through Battelle Tech. Rev. 9: 2482 (Feb. 1960). (1005)

A study covering the modifications of the properties of cellulosic fibers by means of surface treatments and by the synthesis of block and graft polymers and the synthesis of preparations of modification cellulose containing other functional groups, beside the hydroxyl groups.

COMBINED FINISHING OF AWNING FABRICS. N. V. Kalugin. Tekstil. Prom. 19, No. 8: 40-41 (1959). In Russian. Through BCIRA 40: 155 (1960). (1006)

Treatment of awning cloth by means of alkyloxymethylpyridinium chloride (preparation 246) and a solution of latex containing 5 g/l wetting agent is proposed to improve the water and rot resistance of the fabric.

MERCERIZATION AND MERCERIZING AGENTS. M. Rösch. Melliand Textilber. 40, No. 11: 1306-1315 (1959). In German. Through BCIRA 40: 144 (1960). (1007)

After a brief historical review of the development of mercerization, the most important finishing effects expected (luster and increased dye absorption) are discussed in dependence of experimental conditions and on the basis of results obtained by other authors. Several mercerizing machines for yarns and piece goods are briefly mentioned, and testing methods for determining the degree of mercerization are discussed. Reference is also made to combined mercerizing-wetting agents. 27 refs.

LOCATION OF AREAS OF REACTION IN CHEMICALLY TREATED COTTON CELLULOSE. V. W. Tripp, A. T. Moore, I. V. de Gruy, and M. L. Rollins (So. Reg. Research Lab.). Textile Research J. 30: 140-147 (Feb. 1960). (1008)

Observations with the electron microscope have been useful in delineating regions of the fiber cellulose affected by a variety of treatments, including dyeing, mercerization, acid and enzymatic hydrolysis, derivative formation, and resin impregnation. The appearance of fiber fragments treated in these ways or derived from treated fibers is illustrated and discussed. Photomicrographs, 7 refs.

PROPYLENE UREAS IN CREASE-RESIST PROCESSING. J. T. Marsh. Textile Recorder 77: 63, 62 (Feb. 1960). (1009)

Propylene urea compounds for imparting crease-resist properties to cellulose fibers are discussed with particular reference to chlorine retention damage. 3 refs.

CONDENSATION OF UREA-FORMALDEHYDE RESINS IN THE INFRARED DARK RADIATION FIELD IN THE PRESENCE OF AMMONIUM SALT CATALYSTS. W. Vauck. Deut. Textiltech. 9, No. 7: 374-376 (1959). In German. Through BCIRA 39: 4805 (1959). (1010)

Laboratory experiments were carried out to establish the relationship between the amount of ammonium-salt catalyst and condensation time for obtaining optimum condensation effects in the infrared dark radiation field. At a temperature of 180° C, a condensation time of 60 sec and ammonium-salt quantities of 100 mg-equiv./300 g precondensate (50%) appear to give best results as regards washing fastness of the resins and crease recovery angle of the finished spun rayon fabrics.

EFFECT OF CHLORINE ON RESIN FINISHES. W. Schefer. Textil-Rundschau 14, No. 10: 587-594 (1959). In German. Through BCIRA 39: 4808 (1959). (1011)

A review is made of present knowledge concerning the behavior of resin-finished fabrics to chlorine treatments, including the author's own experimental results and the main foreign papers published within the past 12 years. 30 refs.

CREASE-RESISTING THEORY: TREATED TEXTILES. J. T. Marsh. Textile Mfr. 85: 557-561, 564 (Dec. 1959). (1012)

The various theories on the mechanism of creaseproofing are reviewed with pertinent literature references. It is pointed out that with processes in current use there is considerable evidence for some form of molecular entanglement which embraces hydrogen-bonding, complex formation, polymer formation, and the production of covalent cross-linkages. Diagrs.

RECENT DEVELOPMENTS IN FINISHING OF BLENDS. H. H. Latham (Arkansas Co.). Am. Dyestuff Reptr. 49: P40-P43 (Jan. 25, 1960). (1013)

This paper discusses developments in the resin finishing of cellulose/hydrophobic fiber blended fabrics to meet the ultimate in performance standards. Tables, 2 refs.

RESIN FINISHING OF TEXTILE MATERIALS. A. J. Hall. Fibres and Plastics 21: 7-11, 18 (Jan. 1960). (1014)

The adverse effects of resin finishing cotton and rayon (e.g. loss of tensile and tear strength and abrasion resistance, odor formation, chlorine retention, and lack of permanence) are correlated with the chemical characteristics of the urea and melamine formaldehyde resins. The development of such resins as ethylene urea methylols, bifunctional epoxy compounds, triazones, APO, and acetals to overcome these defects is discussed. Diagrs.

IMPORTANCE OF CHLORALKYLAMINES FOR THE CHEMISTRY OF AMINOPLASTS AND OTHER NITROGEN-CONTAINING FORMALDEHYDE CONDENSATION PRODUCTS. PART 3. R. Allscher. Textil-Praxis 14, No. 9: 944-948 (1959). In German. Through BCIRA 39: 4806 (1959). (1015)

In continuation of previous articles (abstr. 117/59 and 1721/59) the author reviews the literature dealing with the chemistry of various types of resins and their behavior to chlorite treatment and the formation of chloramine. The necessity of developing a generally applicable method for the determination of chlorine retention in resin finished fabrics is pointed out. 19 refs.

CHLORITE BLEACHING WITHOUT ODOR TROUBLE DUE TO CHLORINE DIOXIDE. K. H. Lange and H. Bergs. Melliand Textilber. 40, No. 10: 1179-1183 (1959). In German. Through BCIRA 39: 4775 (1959). (1016)

The authors discuss control methods of the bleaching process in the bleaching liquor to avoid the unpleasant odor of chlorine dioxide. The corrosion of the equipment can be largely eliminated by addition of suitable auxiliary agents. A new impregnation method, in which a new activation agent (Axil C, a neutral salt which splits off acid at increased temperature) is used instead of the previous acid activation. This agent shortens the bleaching time, improves the bleaching effect, and reduces the danger of corrosion.

PREPARATION AND BLEACHING. PART 9. CONTINUOUS SYSTEMS. K. S. Campbell (N. C. State Coll. School of Textiles). Textile World 110: 89 (Feb. 1960). (1017)

The four systems currently in use are briefly described.

OBSERVATIONS ON THE CLEANING AND BLEACHING OF COLORED COTTON GOODS. W. Grunwald. Melliand 41, No. 1: 32, 34 (1960). (1018)

Pointers for bleaching with sodium hypochlorite, hydrogen peroxide, and sodium chlorite are given. References to standard procedures of determining dye fastness to the bleaching agents are included.

EFFECT OF HEAT ON OPTICAL BLEACHING AGENTS. J. Sramek. Textil 14, No. 7: 266-270 (1959). In Czech. Through BCIRA 39: 4776 (1959). (1019)

The thermal stability of optical bleaching agents is discussed, and experiments are reported, which were carried out on Rylux (Czech product), Tinopal (Geigy), Uvitex (Ciba), Leukophor (Sandoz), and Blankophor (I. G. Farben). The results are tabulated.

STABILIZERS IN BLEACHING PROCESSES. Textile Recorder 77: 68, 70 (Feb. 1960). (1020)

The factors affecting the stability of hydrogen peroxide solutions and the effect of stabilizers (e.g. metaphosphates in conjunction with acetanilide, phenacetin, or salicylic acid and sodium silicate) are discussed. Tables, 5 refs.

NO-IRON FINISHING OF COTTON FABRICS. J. Slezak and A. Cejnar. Textil 14, No. 10: 386-391 (1959). In Czech. Through BCIRA 40: 149 (1960). (1021)

In this review, the authors discuss the nomenclature of crease resistant finishes, the creaseproofing agents used, swelling, drying, impregnation, predrying, washing after condensation, the effect of urea formaldehyde resins, and examination of the quality of the no-iron finishes (strength, wet crease resistance, shrinkage).

EFFECT OF CURE VARIATIONS ON PROPERTIES OF RESIN TREATED COTTON FABRICS. P. B. Roth and Q. M. Rhodes. Textile Bull. 86: 54-57 (Feb. 1960). (1022)

The effects of temperature and time of curing, type and amount of resin, and type and amount of accelerator on wrinkle recovery, tensile strength, formaldehyde liberation, and chlorine retention are described.

SELF-SMOOTHING CELLULOSIC FABRICS. J. T. Marsh. J. Soc. Dyers Colourists 76: 23-37 (Jan. 1960). (1023)

The author points out that although the conception of chain-molecules in varying degrees of lateral order is now generally accepted, there are dangers of oversimplifying the picture of a network structure as solely comprising the crystallites and amorphous regions. Insufficient attention is paid to the probable existence of a loose network having occasional junction points within the amorphous regions, as in the general theory of gel structures. The mechanical properties of the treated fibers may be influenced by the amount of accessible cellulose and hence by the relative number of heat-formed hydrogen bonds. The latter may be broken after treatment by a form of caustic conditioning or mercerizing, but they may be prevented from forming when the curing stage occurs in steam. Many of the characteristics of the final product may be due to the proportions of normal hydrogen bonds, heat-formed hydrogen bonds, and cellulose-resin-cellulose bonds. Graphs, tables, 59 refs.

REDUCTION OF THE LIPOPHILIC PROPERTIES OF KNITTED POLYAMIDE FABRICS. H. Sonneck. Deut. Textiltech. 9, No. 8: 437-438 (1959). In German. Through BCIRA 40: 205 (1960). (1024)

Various possibilities are discussed to prevent an increased fat absorption by polyamide fibers. Three different preparations have been tested for their skin tolerance and have been found to have neither harmful nor irritating effect, although high concentrations were used. A combination of wool fat with cationic emulsifier, marketed under the trade name of Begapon KI Extra, and a product based on a high molecular alkylguanidine, were found to cause a distinct reduction in the lipophilic properties of Perlon fabric when in contact with greasy skin.

SILICONES IN TEXTILE FINISHING. Imp. Chem. Inds. Ltd. Fibres and Plastics 21: 16-18 (Jan. 1960). (1025)

The benefits conferred by silicone treatments are summarized, and the properties, application, and uses of Emulsion M476, M471, and Silicone Fluid F are discussed.

MECHANISM OF TEAR IN INDUSTRIAL COATED NYLON FABRICS. V. K. Hewinson. Nylon Outlook 2, No. 7: 16-27 (Winter 1959/60). (1026)

The common methods of applying coatings to fabrics are briefly described. The effects of basic fabric properties, the location, penetration, and properties of the coating, and aging on final tear strength are examined. Photos, diagrs, graph, tables, 3 refs.

Dyeing and printing D2

PRINTING MULTICOLOR DESIGNS BY THE THREE COLOR PROCESS WITH CIBACRON DYESTUFFS. H. Werdenberg (Ciba AG). Melliand 41, No. 1: 38-41 (1960). (1027)

The advantages of Cibacron dyes are cited, and some possibilities are shown. Photos.

FIXING PRINTS BY TWO-PHASE PRINTING (COLLORESIN PROCESS) WITH HYDROSULFITE. E. Elöd and W. Graeser. Textil-Praxis No. 1: 23-25 (1959). Through BCIRA 40: 142 (1960). (1028)

TRICHROMATIC PRINTS WITH CIBACRON DYES IN ROLLER PRINTING. H. Werdenberg (Ciba Ltd). Ciba Rev. 12, No. 135: 38-40 (Dec. 1959). (1029)

DYEING BLENDS OF DACRON POLYESTER FIBER AND COTTON BY THE DU PONT THERMOSOL PROCESS. J. J. Iannarone and W. J. Wygand (E. I. du Pont de Nemours & Co.). Am. Dyestuff Reptr. 49: P81-P85 (Feb. 8, 1960). (1030)

The Thermosol process is particularly effective in the application of disperse dyes to Dacron and its blends with cellulosic fibers. In dyeing this important blend, selected disperse dyes are used to dye the Dacron by the Thermosol process and, where necessary, vat dyes are applied to the cotton by conventional procedures. Fabrics dyed in this manner are generally equal in fastness to vat-dyed cotton and will meet wash-and-wear fastness requirements. Photos, photomicrographs, tables, 10 refs.

FIBER REACTIVE DYES. PART 3. PRINTING WITH THE FIBER REACTIVES (continued). Textile Inds. 124: 132-135 (Feb. 1960). (1031)

The advantages and disadvantages of printing with reactive dyes are summarized.

FIBER REACTIVE DYES. PART 4. DYEING COTTONS WITH THE FIBER REACTIVES. Textile Inds. 124: 134-138, 157, 161 (Feb. 1960). (1032)

The principal padding methods for the application of reactive dyes to cotton are described and compared. Photos.

RECENT ADVANCES IN TEXTILE PRINTING WITH SPECIAL REFERENCE TO CALCIUM SULFOXYLATE FORMALDEHYDE. R. J. Hannay (Assoc. Chem. Co. Ltd). J. Soc. Dyers Colourists 76: 11-15 (Jan. 1960). (1033)

A description is given of investigations aimed at producing increased stability of prints containing sulfoxylate formaldehyde reducing agents and avoidance of haloing and wicking in the production of discharge prints on protein fibers and synthetic fibers such as acetate rayon and nylon. 3 refs.

KINETICS OF NEUTRAL DYEING OF WOOL WITH 1:2 METAL COMPLEX DYES. H. Ackermann. Dyer 123: 155 (Jan. 29, 1960). (1034)

In the neutral dyeing of wool the various cations have a pronounced effect on the rate of exhaustion, similar to that observed in the direct dyeing of cellulose.

DYEING AND FINISHING SPECIAL BLENDS OF ARNEL WITH ACRYLICS AND ARNEL WITH COTTON IN CIRCULAR KNIT APPLICATION. PART 1. R. E. Lacy and J. A. Dayvault (Celanese Fibers Co.). Am. Dyestuff Reptr. 49: P76-P80 (Feb. 8, 1960). (1035)

The following items are discussed: a 1-bath process for union shades on Arnel/Orlon; dyehouse processing of Arnel/Orlon tubular knit fabrics; principles used in dyeing Arnel/Acrilan; and dyeing and finishing Arnel/cotton tubular knit fabrics. Diagrs, graphs, tables.

DYEING DACRON BY EMULSIONS OF SOLVENT SOLUTIONS OF DYES. R. J. Peirent, J. Casey, and G. Dadoly (Lowell Technol. Inst.). Am. Dyestuff Reptr. 49: P72-P75 (Feb. 8, 1960). (1036)

A solvent-dyeing system in which a solvent solution of a dye is emulsified in water was found to be a very effective method of dyeing Dacron 54. The effects of dyeing time and temperature, volume of solvent, and concentration of emulsifier were investigated. Several solvents and dyes were considered. Tables, 4 refs.

COMBINATION OF LOW ACTIVITY DIAZO COMPOUNDS WITH AZOTOLS. R. M. Shchegoleva and F. I. Sadov. Tekstil. Prom. 19, No. 8: 37-39 (1959). In Russian. Through BCIRA 40: 134 (1960). (1037)

It has been shown that the reaction on fabric of Diazol Blue O with Azotol takes place only in alkaline medium, at an optimum pH value of 8.5-9.7, and at a low rate whereby the reaction is slower on cotton than on rayon staple fiber. The addition of 6-10 g/l of sodium bicarbonate to the diazol solution when dyeing with Diazol Blue O is recommended for azotol-treated fabric.

RECENT ADVANCES IN THE PRESSURE BEAM DYEING OF SYNTHETIC FABRICS. W. J. Newcomb and G. C. Ward. Am. Dyestuff Reptr. 49: P86-P89 (Feb. 8, 1960). (1038)

Recent mechanical advances in pressure-beam dyeing machines are described, and general methods for the processing of typical fabrics are given. Suggestions are made for achieving level dyeing, satisfactory fastness, and proper setting. Photos, 11 refs.

CLEARING THE WOOL PORTION WHEN DYEING POLYESTER FIBER WOOL UNIONS. H. Stern (Ciba Ltd). Ciba Rev. 12, No. 135: 37-38 (Dec. 1959). (1039)

Three methods of clearing wool in the 3-bath method of union dyeing are compared as to water and perspiration fastness.

DYEING CHLORINATED WOOL WITH THE ASSISTANCE OF UNIVADINE W. J. Lanter (Ciba Ltd). Ciba Rev. 12, No. 135: 35-36 (Dec. 1959). (1040)

DYEING AND PRINTING POLYESTER WITH POLYESTREN DYESTUFFS. H. Musshoff (Cadella Farbwerke). Textile Mfr. 85: 548 (Dec. 1959). (1041)

The application of Polyestren vat dyes by the steps of padding, drying, heat setting, and reduction is briefly described.

DYEING CORVAL CROSS-LINKED CELLULOSE FIBER. E. I. du Pont de Nemours & Co. Dyes & Chem. Tech. Bull. 15: 189-200 (Dec. 1959). (1042)

Procedures and dye compositions for dyeing blends of Corval with Dacron, Orlon, and wool are given.

DU PONT DYES FOR VYCRON POLYESTER FIBER. E. I. du Pont de Nemours & Co. Dyes & Chem. Tech. Bull. 15: 178-188 (Dec. 1959). (1043)

Dyeing procedures and recommended dye compositions for Vycron, Vycron/Acrilan, and Vycron/rayon.

DYEING OF DACRON POLYESTER TOW. J. J. Iannarone, Jr. (E. I. du Pont de Nemours & Co.). Dyes & Chem. Tech. Bull. 15: 206-212 (Dec. 1959). (1044)

The dyeing of tow is covered in detail, and general recommendations for dyeing by conventional methods, by the Pad-Fix method, and in the Burlington machine are given. Formulations and fastness properties are given for a number of shades. Tables.

RECENT DEVELOPMENTS IN WOOL DYEING. W. Beal. Textile Mfr. 85: 562-564 (Dec. 1959). (1045)

Recent developments in continuous, solvent assisted, and acid dyeing techniques are summarized. Diagrs.

CARRIERS IN THE APPLICATION OF DISPERSE DYES. E. Stead. Dyer 123: 187, 189 (Jan. 29, 1960). (1046)

The role of carriers in increasing the rate of diffusion of disperse dyes is discussed briefly, with pertinent examples.

USE OF SULPHIROL-8 IN SULFUR DYEING. A. M. Sporkin and M. R. Tsimel'son. Tekstil. Prom. 19, No. 8: 80 (1959). In Russian. Through BCIRA 40: 136 (1960). (1047)

Experiments have shown that by using 5-10 g/l of Sulphirol-8 wetting agent (sodium salt of sulfo-ester-2-ethylhexanol) in the dye liquor a more even and intense color is obtained; it also increases the fastness of the dyeings in the wet and dry states and the fastness to rubbing.

VEROFIX FIBER REACTIVE DYE. Verona Dyestuffs. Textile Inds. 124: 161 (Feb. 1960). (1048)

The general properties of Verofix and methods of application are outlined.

HOW MUCH RESEARCH? CRITICAL PROBLEM IN THE MANUFACTURE OF TEXTILE DYES. G. S. J. White (Imp. Chem. Inds. Ltd). J. Soc. Dyers Colourists 76: 16-22 (Jan. 1960). (1049)

This brief review is intended to show the infrequency with which an organic chemical reaction unexpectedly yields a colored compound of value in application and the importance of appreciating the needs of the textile dye-using industry, so as to define the targets for dyes with properties of color, application, or fastness not hitherto available. Diagrs, tables, 4 refs.

APPARATUS FOR DYE TESTING. P. Fourlande. Industrie Textile: 469-471 (June 1959). In French. Through BCIRA 39: 4791 (1959). (1050)

A laboratory apparatus is described, developed for the comparative examination of various dyes so as to be able to adjust dye mixtures or to test the dyeing properties of certain materials to be dyed simultaneously under the same conditions. The apparatus consists of heating means and a heating tank containing a liquid, in which are immersed flat-bottomed dye containers (glass) resting directly on the bottom of the heating tank. At a suitable illumination it is possible to observe the processes occurring in the various containers at various temperatures.

APPLICATION OF THE THERMODIFFUSION METHOD IN DYE SEPARATION. B. M. Bogoslovskii, B. M. Yavorskii, and A. D. Virnik. Zhur. Priklad. Khim. 32, No. 10: 2225-2229 (1959). In Russian. Through BCIRA 39: 4790 (1959). (1051)

Preliminary results are reported of a study, carried out on the effect of thermodiffusion on dye solutions and solutions of dye mixtures by recording the increase in dye concentration in the lower end of the thermodiffusion column. The change in the concentration reaches almost a maximum after 1-2 hr and then it slows down considerably. In the case of solutions containing dye mixtures, the dye component with a lower molecular-weight or, at the same molecular weight, that with a relatively smaller molecule length, accumulates in the lower end of the column.

CONTINUOUS DYEING WITH SUBSTANTIVE DYES. H. Kunze. Deut. Textiltech. 9, No. 10: 552-555 (1959). In German. Through BCIRA 40: 135 (1960). (1052)

Preliminary treatments in pad dyeing are described. Continuous fixing without steaming and aftertreatment with cationic substances, the fastness obtained, as well as the occurrence of defects, are discussed.

DEVELOPMENT OF SCREEN PRINTING UP TO MODERN MECHANIZED PRINTING. A. Airoldi. Tinctoria 56, No. 9: 35-41 (1959). In Italian. Through BCIRA 39: 4801 (1959). (1053)

In this review, the author discusses early screen printing processes (hand and machine operated) and describes various systems of modern mechanized screen printing, with special reference to the Meccano-film machine (Meccanotex, Bergamo) and the printing method used. The article is supplemented by a table containing production figures for hand and mechanized printing.

MULTICOLOR PRINTING METHOD FOR ONE ROLLER. Z. ges. Textil-Ind. 61, No. 20: 826 (1959). In German. Through BCIRA 39: 4800 (1959). (1054)

A new printing method for any number of colors is described (inventor Englander), for which only one printing roller is required and which can be applied to all natural and synthetic textile fibers by using acid, direct, vat, and pigment dyes. The dye reserve of a roller is claimed to be sufficient for printing 3,000 to 25,000 m.

DRIVE FOR DRYING CHAMBERS IN CALICO PRINTING. H. Geissler and T. Becker. Textil-Praxis 14, No. 9: 1935-1937 (1959). In German. Through BCIRA 39: 4799 (1959). (1055)

Siemens-Schuckertwerke have developed a standard drying machine drive that eliminates the influence of varying printing roller diameters on the operating speed in the dryer. The mechanism of the new device is explained and illustrated.

PRODUCTION OF INSOLUBLE AZO DYES ON CELLULOSIC YARN PACKAGES. H. Tramnitz. Spinner u. Weber 77, No. 19: 1164-1172 (1959). In German. Through BCIRA 39: 4783 (1959). (1056)

The dyeing process is discussed theoretically and from the practical viewpoint, with special reference to package dyeing. Particular importance is attached to the problems of machine dyeing (e.g. swelling and crocking fastness), experimental results are reported, and practical advice is given for the production of faultless dyeings (use of polyphosphates, aftersoaping of Naphthol dyeings).

DYEING OF CELLULOSE FIBER KNIT GOODS WITH REMAZOL DYES. H.-U. von der Eltz. Z. ges. Textil-Ind. 61, No. 21: 857-860 (1959). In German. Through BCIRA 39: 4782 (1959). (1057)

A method for winch-beck dyeing of knitted fabrics with Remazol dyes at 20-30° C is described and the effects of alkalis in the dyebath, liquor ratio, dyeing temperature, and type and quantity of salt used are discussed. An assortment of suitable Remazol dyes is given, and brief reference is made to their fastness properties.

RANDOM COLOR EFFECTS IN TUFTED CARPETS. Man-Made Textiles 36: 38, 40 (Jan. 1960). (1058)

The technique of skein dyeing for introducing random color effects in tufted carpets is described.

LIGHTFASTNESS OF SEVRON DYES ON DYNEL. E. I. du Pont de Nemours & Co. Dyes & Chem. Tech. Bull. 15: 204-205 (Dec. 1959). (1059)

CONTINUOUS AFTERTREATMENT OF DIRECT DYEINGS WITH CATIONIC AGENTS. P. Ulrich. Z. ges. Textil-Ind. 61, No. 19: 764-766 (1959). In German. Through BCIRA 39: 4784 (1959). (1060)

Variations of the pad method with direct dyes are enumerated, and directions are given for a suitable aftertreatment of the dyeings with cationic compounds, e.g. Lyofix EW and Lyofix SB concentrate, to improve their wetfastness. This aftertreatment can be carried out by padding and drying, or in the roller vat followed by drying; the former method may be combined with finishing treatments, whereby intermediate drying is necessary after dyeing and rinsing. Examples are given for such a combined treatment.

CONTINUOUS DYEING WITH SULFUR AND REACTIVE DYES. D. Scharch. Deut. Textiltech. 9, No. 10: 546-551 (1959). In German. Through BCIRA 40: 137 (1960). (1061)

After reviewing the present installations available for continuous dyeing and the preliminary treatment of the fabric, the author discusses in detail the use of sulfur dyes in continuous dyeing plants. The substantivity of various sulfur dyes during the padding process, the effect of alkali on substantivity, and the use of highly concentrated products are investigated. Experiences with regard to the most favorable fixing conditions and results of continuous dyeing experiments with reactive dyes (Procion, Cibacron, and Remazol dyes), their fastness properties, and permanent wash resistance are discussed.

EFFECT OF THE FIBER ON THE LIGHTFASTNESS OF DYES. A. Schaeffer. SVF Fachorgan Textilveredlung 14, No. 10: 669-680 (1959). In German. Through BCIRA 40: 199 (1960). (1062)

Extensive exposure tests with dyes of all classes on various natural, regenerated and synthetic fibers showed that the highest lightfastness is exhibited by a dye which is most closely linked with the fiber. A dye which is not sufficiently fixed on the fiber shows the least lightfastness (expressed as inferior wetfastness).

PUTTING COLOR INTO TUFTED CARPETS. R. C. Cheetham (Courtaulds Ltd). Skinner's Silk & Rayon Record 34: 175-181 (Feb. 1960). (1063)

In this survey of the main principles underlying tufted carpet dyeing, suitable dyes and machinery for staple, yarn, and piece dyeing are described. Photos, diagr, 15 refs.

EFFECT OF RESIN FINISHES ON THE LIGHTFASTNESS OF CIBACRON DYEINGS AND PRINTS. Ciba Ltd. Ciba Rev. 12, No. 135: 41-47 (Dec. 1959). (1064)

Mechanical processes D3

ELASTIC COATED ROLLERS FOR CALENDERS IN TEXTILE FINISHING. J. Härtig. Textil-Praxis 14, No. 10: 1035-1039 (1959). In German. Through BCIRA 39: 4814 (1959). (1065)

Various types and constructions of calenders used in textile finishing and their requirements as regards the number and arrangement of rollers, pressure, temperature, and construction material are discussed, with special reference to the patent literature dealing with various covering materials.

AUTOMATIC SELVAGE CONTROL DURING ROLLING UP OF FABRIC LENGTHS. K. Meissner. Spinner u. Weber 77, No. 20: 1226-1228 (1959). In German. Through BCIRA 39: 4812 (1959). (1066)

The mechanism of the pneumohydraulically or electrohydraulically operating control device (Regulator SRL, Milan) is described, and some examples of its use are given.

SCHREINER FINISH ON NYLON TRICOT. D. Hardisty. Nylon Outlook 2, No. 7: 28-35 (Winter 1959/60). (1067)

In this discussion of the application of Schreiner finishes to warp knit nylon fabrics, the effects of such process variables as bowl engraving; calender temperature, pressure, and speed; and the stage at which the calendering is introduced into the finishing sequence are discussed. Photos, diagrs, tables.

Drying, setting, conditioning D4

SETTING OF KNIT FABRICS FROM SYNTHETIC FIBERS. V. A. Ilyashevich and V. G. Leshchenko. Deut. Textiltech. 9, No. 7: 372-373 (1959). In German. Through BCIRA 39: 4815 (1959). (1068)

Thermosetting of manmade fiber fabrics by means of infrared radiation is discussed, with reference to the Universal Dry-fixing Apparatus USS-186J and a modified tenter drying machine RX1 (for simultaneously drying two fabric widths) with four drying chambers, of which the last is replaced by a setting chamber.

SUITABLE STEAM SETTING SYSTEMS FOR KNITTED OUTERWEAR. H. J. Bergmann. Melliand 41, No. 1: 41-46 (1960). (1069)

The factors necessary for good steaming are discussed, and features of the Novakust system models are described. Photos, diagr.

SETTING OF KNITTED PERLON FABRICS WITH INFRARED. H. Kutsche. Deut. Textiltech. 9, No. 8: 427-431 (1959). In German. Through BCIRA 40: 151 (1960). (1070)

The suitability of infrared radiation for setting of knitted Perlon fabrics has been investigated to establish the required working conditions. Since the optimum setting temperature of Perlon is 190° $\pm$ 2° C it was necessary to examine first the homogeneity of the radiation field. Although this has been improved the method has not proved satisfactory, owing partly to differences in the radiation intensity and partly to the structural irregularities of the fabric.

CAUSES OF DEFORMATION IN SET PERLON MONOFILAMENTS. W. Wegener. Reyon Zellwolle Chemiefasern 9, No. 8: 536-542; No. 9: 611-614; No. 10: 677-684 (1959). In German. Through BCIRA 40: 189 (1960). (1071)

The causes of cross sectional changes and length distortions in twisted set Perlon filaments are investigated. The cross section deformations are attributed to the use of rigid aluninum tubes on which the twisted material is subsequently set, whereas the distortions in a longitudinal direction (which may also run in the opposite direction to the twist) are due to twisting and setting (tension variations). The individual experiments are illustrated by diagrams and photomicrographs.

MARION AVP HEAT SETTING AUTOCLAVE. Chaudronnerie Marion. Hosiery Times 33: 64-66 (Feb. 1960). (1072)

The control system which promotes identical repeat conditions is described.

INFRARED AND ALLIED HEATING METHODS IN THE PROCESSING OF TEXTILES. G. H. Moule. Hosiery Times 33: 46, 51, 53 (Feb. 1960). Textile Weekly 60(1): 41, 43-44 (Jan. 8, 1960). (1073)

TESTING AND MEASUREMENT E

ASTM STANDARDS ON TEXTILE MATERIALS (WITH RELATED INFORMATION). Am. Soc. for Testing Materials, 1916 Race St., Philadelphia 3, Pa. 1959. 924 p. $8.50. (1074)

The 1959 edition contains 134 standards of which 23 are new, revised, or have had their status changed recently.

Fibers E1

COTTON TESTS. H. Perner. Deut. Textiltech. 9, No. 8: 401-406; No. 10: 523-527 (1959). In German. Through BCIRA 40: 173 (1960). (1075)

A review is made of the most important publications in the field of cotton testing with special reference to devices used for determining fiber fineness (micronaire, Arealometer, Speedar, Port-Ar, and Fibronaire) and fiber strength (Pressley, Stelometer, and Clemson tester). Experiences gained in using the micronaire and Pressley tester are reported, and methods for determination of fiber maturity are briefly described. 42 refs.

FIBER DAMAGES BY FUNGI. K. H. Richter. Deut. Textiltech. 9, No. 10: 555-559 (1959). In German. Through BCIRA 40: 172 (1960). (1076)

The methods for testing the microbiological action of various fungi types and the susceptibility of textile fibers to the attack of fungi are investigated, and photomicrographs are given to show the growth of certain species on cotton and linen fibers.

THE IDENTIFICATION AND DIFFERENTIATION OF ACRILAN AND ACRILAN 16 FROM OTHER ACRYLIC OR RELATED FIBERS. Chemstrand Corp., Decatur, Ala. Jan. 1960. 10 p. Bull. no. AP-16. (1077)

SIMPLE METHOD FOR DETERMINING THE DEGREE OF SETTING ON POLYAMIDE AND POLYESTER FIBERS. K. Schwertassek. Faserforsch. u. Textiltech. 10, No. 8: 387-392 (1959). In German. Through BCIRA 40: 178 (1960). (1078)

The method described is based on determining the temperature at which the fiber tested dissolves in sulfuric acid of a certain concentration within 4-5 or 3-4 sec (critical dissolution temperature). The value depends upon the degree of setting achieved by various processes (hot water, hot air, saturated steam setting). The method was used successfully in the case of polyamide 6 and 66 fibers, and was also examined as to its applicability to polyester filaments, rayon, and staple fibers.

TESTING OF SYNTHETIC FIBERS. PART 1. E. Frieser. Spinner u. Weber 77, No. 19: 1173-1178 (1959). In German. Through BCIRA 39: 4843 (1959). (1079)

The author discusses classification, trade names, methods of preparation, and microscopical and chemical examination of polyvinyl chloride, vinyl chloride/vinyl cyanide (acrylonitrile), polyvinyl cyanide (polyacrylonitrile), vinyl cyanide/vinyl acetate, polyvinylidene cyanide, vinyl cyanide/vinylidene chloride, polyvinyl alcohol, polytetrafluoroethylene, polyethylene, and polyvinylbenzene (polystyrene) fibers.

IDENTIFICATION AND DIFFERENTIATION OF DAMAGES ON POLYAMIDE FIBERS. PART 1. H. Modlich. Textil-Praxis 14, No. 10: 1041-1043 (1959). In German. Through BCIRA 39: 4847 (1959). (1080)

Damages caused by light, heat, acids, oxidizing agents and mechanical factors are discussed with reference to laboratory experiments on Perlon material. The results are tabulated.

GROUP REAGENT FOR HIGH POLYMERS. DETECTION OF HIGH POLYMERS CONTAINING CARBOXYL GROUPS (NATURAL COLLOIDS AND PLASTICS) ACCORDING TO THE REBEK CRYSTAL VIOLET BASE METHOD. M. Ulrich. Textil-Praxis 14, No. 10: 1040 (1959). In German. Through BCIRA 39: 4846 (1959). (1081)

The Rebek method has been examined for its suitability in studying the tendering process taking place in cellulose fabric by light, heat, bleaching agents, or radioactive radiation, and for detecting carboxyl group-containing deposits on fibers, e.g. alginate, carboxymethyl cellulose, polyacrylic, and polymethacrylic acids.

TRYPTOPHAN IN WOOL. PART 1. DETERMINATION OF THE TRYPTOPHAN CONTENT OF WOOL. D. R. Graham and K. W. Statham (Abbey Meadow Mills). Textile Research J. 30: 136-139 (Feb. 1960). (1082)

The determination of the tryptophan content of wool by a modification of the Spies and Chambers method for the estimation of tryptophan in intact proteins is described. Graph, tables, 13 refs.

CLASSIFICATION OF COTTON BY USING CLASSIFICATION BLOCKS. J. Kubik. Textil 14, No. 7: 248-249 (1959). In Czech. Through BCIRA 39: 4841 (1959). (1083)

This auxiliary device is described, and its use demonstrated.

ATTEMPTS TO MEASURE THE ELASTICITY OF VARIOUS FIBERS. L. Rudolph. Rayonne et Fibres Synthet. 15, No. 10: 1113-1120 (1959). In French. Through BCIRA 39: 4839 (1959). (1084)

Various methods of measuring the elasticity of fibers are briefly reviewed, and an apparatus is described which measures and registers the elasticity of swollen fibers subjected to repeated compression. The values obtained for various fibers are listed in a table. The results concerning the stiffness of fibers are not always parallel to those of the degree of elasticity, the differences between the fibers being due to differences in fiber length and fiber fineness.

TEXTILE MICROSCOPY. PART 1. HISTORY AND DEVELOPMENT. H. Reumuth. Z. ges. Textil-Ind. 61, No. 19: 767-775 (1959). In German. Through BCIRA 39: 4837 (1959). (1085)

Brief biographies are given of the pioneers of textile microscopy, with special reference to the microscopy of human and animal hair, the development of textile microscopy in various countries, and statistical and cinematical investigations (importance of photography and cinematography).

RAPID METHOD FOR THE PREPARATION OF FIBER CROSS SECTIONS. R. Mares. Textil 14, No. 8: 303-306 (1959). In Czech. Through BCIRA 39: 4836 (1959). (1086)

The method described, in which an improved Herzog microtome is used, makes it possible to obtain 10-μ fiber sections within 10-30 min, according to the method used. Four variations of the rapid method are described.

REACTION MECHANISM OF FIBERS DURING EMBEDDING IN SWELLING AGENTS OR SOLVENTS. M. Stratmann. Z. ges. Textil-Ind. 61, No. 21: 842-846 (1959). In German. Through BCIRA 39: 4850 (1959). (1087)

The inner mass of polyvinyl acetal fibers forms, during embedding in zinc chloroiodide solutions, a bluish-colored, highly compressed tube which disappears in the course of the reaction, leaving transparent yellow sheaths. The problem, whether this tube is due to the unswollen fiber mass and the sheath to the already swollen fibers, is investigated on superficially saponified cellulose acetate and on polyvinyl acetal fibers.

SYSTEM OF DYNAMIC TESTING METHODS FOR HIGH POLYMER SOLIDS. PART 6. METHODS FOR DETERMINING THE DYNAMIC TORSIONAL STRESS. F. Winkler. Faserforsch. u. Textiltech. 10, No. 8: 376-379 (1959). In German. Through BCIRA 40: 177 (1960). (1088)

Twelve out of the 45 possible methods for testing the dynamic torsional stress, damped torsional stresses and continuous torsional stresses are reviewed. 47 refs.

FIBER TUFT STRESS STRAIN TESTER. F. Walz and J. Bröckel. Textil-Praxis 14, No. 9: 889-892 (1959). In German. Through BCIRA 39: 4838 (1959). (1089)

To simplify the testing of individual fibers for strength and elongation, a special fiber bundle tester has been developed (cf. the Stelometer) and its mechanism is described. The load-extension diagrams are explained and evaluated.

DETERMINATION OF FIBER FINENESS IN MANMADE FIBERS WITH SPECIAL REFERENCE TO THE MICRONAIRE AND VIBROSCOPE METHODS. J. Lünenschloss and E. Hummel. Textil-Praxis 14, No. 9: 867-873 (1959). In German. Through BCIRA 39: 4844 (1959). (1090)

The gravimetric, microscopic, air permeability (micronaire), and vibroscope methods have been compared. The micronaire method has proved to be the most suitable for measuring the fiber fineness in production control and also for determining the mixing ratio of fibers of different fineness and the blend regularity.

NOMOGRAM FOR USE WITH THE VIBROSCOPE. L. I. Epstein (Lowell Technol. Inst.). (Letter to the editor). Textile Research J. 30: 148-149 (Feb. 1960). (1091)

Yarns E2

THE ANALYSIS OF VARIATIONS FOR CERTAIN PHYSICAL PROPERTIES OF COMBED COTTON YARNS. D. S. Hamby and others. Textile Quality Control Papers 7: 99-124 (1960). (1092)

Variations in yarn size and yarn strength are analyzed, averages and dispersion among mills are demonstrated, and various correlations of the two types of properties are investigated. Graphs, tables, 7 refs.

FOUR WAYS TO MEASURE COTTON-YARN STRENGTH. N. H. Pomfret. Textile World 110: 52-53 (Feb. 1960). (1093)

The pros and cons of the skein, single-end, ballistic, and continuous methods of testing yarn strength are discussed.

A LOSS IN CURING TEST FOR TIRE CORDS. S. L. Reegen and J. Sabo (Industrial Rayon Corp.). J. Appl. Polymer Sci. 2: 337-339 (Nov./Dec. 1959). (1094)

A laboratory method for determining the effect of curing conditions on the tensile strength of tire cords has been developed which makes use of rubber-cord pads cured in a mold. The tensile strengths of the cured cords embedded in rubber are measured after removal from the mold. The method is suitable for nylon cords, either bare or dipped. It has been determined that tensile strength losses during curing of nylon are caused by shrinkage of the cords in the presence of moisture. Diagr, graph, tables, 5 refs.

DEPENDENCE OF THE TENSILE STRENGTH OF FILAMENTS UPON TEST LENGTH. PART 3. NEW CRITERION AND ITS VALUE FOR VARIOUS FIBER TYPES. A. Sippel. Faserforsch. u. Textiltech. 10, No. 8: 369-371 (1959). In German. Through BCIRA 40: 191 (1960). (1095)

The term mean-value length (the length for which the breaking strength of a thread is equal to a mean value from the breaking strength at zero test length and that at infinite test length) is developed from a previously derived equation for the dependence of tensile strength upon the test length of the sample. This value, which expresses this dependence by a single number, is a new characteristic depending to a great extent upon the raw material, and can also be used in evaluating the suitability of production method, e.g. nature of drawing.

MEASUREMENT AND EVALUATION OF YARN IRREGULARITIES IN INDUSTRIAL PRACTICE. PART 2. S. Kleinheins. Textil-Praxis 14, No. 9: 887-889 (1959). In German. Through BCIRA 39: 4858 (1959). (1096)

For the determination of yarn quality two tests are necessary in which the irregularity is determined on short and long lengths, respectively. The two irregularity values are evaluated from the so-called K-value which gives a measure of the spinning quality. Equations for calculating the K-value are given taking into account the effective irregularity, yarn count, fiber fineness, and fiber lengths. (See also abstr. 225/60).

TENSILE STRENGTH OF TEXTILE FILAMENTS AT DIFFERENT ELONGATION RATES. H. Martin. Faserforsch. u. Textiltech. 10, No. 8: 371-375 (1959). In German. Through BCIRA 40: 190 (1960). (1097)

Yarns from various fibers are examined as to their tensile strength by means of a rapid tensile tester, in which the elongation rates are adjustable between 0.04 and 1600%/sec. With the exception of flax yarn whose strength remains practically unaffected by the elongation rate or time at break, higher strengths are found in all other fibers at a higher elongation rate, i.e. at a shorter breaking time. The dependence of the tensile strength upon the elongation rate is expressed by strength coefficients which take into account the test results of Meredith.

DYNAMOMETRIC STRENGTH OF THREADS FROM SHORT FIBERS AND OF BLENDS FROM SHORT FIBERS OF A DIFFERENT NATURE. A. Briguardello. Brasil Textil No. 6: 12-13 (1959). In Portuguese. Through BCIRA 39: 4861 (1959). (1098)

Breaking lengths (strength in g x metric count) are calculated for various cotton varieties, applying a correction coefficient q varying between 0.6 and 0.8, depending upon the type of fiber and its regularity. Similar treatment is applied to manmade fibers.

STATISTICAL ANALYSIS OF YARN AND FILAMENT IRREGULARITY. PART 2. IDEAL YARN, REAL YARN, FILAMENTS. H. Giesekus. Faserforsch. u. Textiltech. 10, No. 8: 359-368; No. 9: 420-429 (1959). In German. Through BCIRA 40: 188 (1960). (1099)

In continuation of the previous article (abstr. 4231/59), the author advances first the irregularity theory for the ideal and then that for the real yarn (with reference to the drafting theory, the Grosberg approximation equation, draft with mixing effect, groupwise fiber movement and reformulation of the drafting theory, representation of the latter by means of the spectrum, an analogue to the Grosberg approximation, and an example illustrating the terms and formulas derived). Analysis of filament irregularity is made in the same manner.

SMALL COMPENDIUM ON THE IRREGULARITIES OCCURRING IN SPINNING. S. Kramer. Spinner u. Weber 77, No. 19: 1152-1156 (1959). In German. Through BCIRA 39: 4857 (1959). (1100)

A brief outline is given of the theory of mass irregularity in slivers, rovings, and yarns. The measuring and testing methods used are discussed, with special reference to electronic yarn regularity testers. The applicability of these devices in continuous spinning plant control is pointed out, and a review is made of the present state of technology for measuring the yarn irregularity.

Fabrics E3

METHOD FOR DETERMINING THE WET CREASING ANGLE. W. Ernst and A. Braschler. Textil-Rundschau 14, No. 9: 512-514 (1959). In German. Through BCIRA 39: 4873 (1959). (1101)

The method described and illustrated makes it possible to test both sides of the fabric simultaneously; each sample (16 x 36 mm) gives two values from which the mean value is calculated. The reproducibility is good; the relatively high inaccuracy (± 6°) is due to the short ends of the sample and the nonuniformity of the textile material itself.

CHEMICAL FINISHING OF CELLULOSE FIBERS WITH PARTICULAR REFERENCE TO THE EVALUATION OF SUITABLE TEST METHODS. PART 3. K. May, O. Rothe, and L. May. Melliand Textilber. 40, No. 10: 1206-1208 (1959). In German. Through BCIRA 39: 4807 (1959). (1102)

In continuation of the previous articles, the following tests of wear properties of finished fabrics are described: crease resistance in the dry and wet states, and shrink resistance. Tests for special finishes comprise determinations of tensile strength and elongation, relative knot strength, abrasion resistance, effect of dyeing, and practical wear testing.

DETERMINATION OF THE CHLORINE RETENTION OF TEXTILES. Swiss Standards Assoc. Textil-Rundschau 14, No. 10: 609-610 (1959). In German. Through BCIRA 39: 4809 (1959). (1103)

The Swiss Standard Specification SNV 95620 defines the term chlorine absorbability (the amount of chlorine retained by resin treated cellulosic fabrics) and describes the method, apparatus and reagents, and preparation of the sample for determining (1) the chlorine retention of the fabric treated with alkaline sodium hypochlorite solution and (2) the extent to which the resin (in exceptional cases also the fiber) is oxidatively degraded by chlorine solutions. The method can also be used for evaluating the danger to which chlorinated fabrics are exposed during heat treatment.

DETERMINATION OF THE YARN SLIPPAGE (SLIPPAGE RESISTANCE) IN FABRICS. STRIP TEST. Swiss Standards Assoc. Textil-Rundschau 14, No. 9: 537 (1959). In German. Through BCIRA 39: 4869 (1959). (1104)

The Swiss Standard Specification SNV 98471 gives the description of the test for yarn slippage in 100 x 30 mm fabric strips (sampling, sample preparation, method, and evaluation of the test). The mean values obtained from the individual values for warp and weft separately, divided by 2.5, give the mean slippage resistance/cm strip width.

TENSILE STRENGTH DETERMINATION OF FABRICS BY THE AMERICAN GRAB TEST AS COMPARED WITH THE GERMAN STRIP METHOD. E. Wagner and H. Schlenker. Melliand Textilber. 40, No. 11: 1281-1286 (1959). In German. Through BCIRA 40: 195 (1960). (1105)

The authors discuss the techniques of carrying out tensile tests by the grab test and the strip method, the effect of tearing rate, data on carrying out the comparative experiments, comparison between strip breaking load and grab breaking load, dependence of the relative grab breaking load upon strip elongation, formulas for calculating the grab breaking load from the strip test, and advantages and disadvantages of the grab test.

NEW ARTIFICIAL WEATHERING METHODS: RUBBER, PLASTICS, AND TEXTILES. G. F. Bush (G. F. Bush Associates). Am. Dyestuff Reptr. 49: 64-70 (Feb. 8, 1960). (1106)

The general purpose of this paper is to present briefly the problems and progress, mainly since 1955, in the artificial weathering of materials. Topics included are: effects of sunlight, moisture (including rain), temperature, gases, nuclear radiation, dust, and wind; and instrumentation for controlling some of these quantities at preset values in the test space. Photo, graph, 77 refs.

Other E4

HARDNESS, ABRASION, AND WEAR RESISTANCE TESTING OF PLASTICS. L. Boor. ASTM Bull. No. 244: 43-47 (Feb. 1960). (1107)

The author reviews the methods available and discusses the interpretation and applicability of the results. Diagrs, graphs, 18 refs.

SPECTROMAT IN THE TEXTILE INDUSTRY. Melliand Textilber. 40, No. 10: 1196-1197 (1959). In German. Through BCIRA 39: 4794 (1959). (1108)

Formulation of recipes, shading, and color control can be obtained with the aid of the new Spectromat filter spectrograph.

POSSIBILITIES AND LIMITS OF COLORFASTNESS TESTING. E. Brunnschweiler. SVF Fachorgan Textilveredlung 14, No. 10: 655-669 (1959). In German. Through BCIRA 40: 198 (1960). (1109)

In this review, the author enumerates the most important European and American organizations dealing with textile standards, and discusses the principles of fastness testing, problems and differences in the evaluation of test results, lightfastness determination, and factors affecting the test (spectral composition of the light sources, humidity, temperature, foreign gases, color depth, substrate, dyeing method, pre- and after-treatments, washing fastness), and the use of fastness grades in practice.

TESTING OF CROCKING FASTNESS AND OF FASTNESSES TO DECATIZING, WATER, AND MERCERIZATION. SVF Fachorgan Textilveredlung 14, No. 10: 697-701 (1959). In German. Through BCIRA 40: 200 (1960). (1110)

The crockmeter (manufactured under license of the AATCC, by Fryma Maschinen AG) and 3 devices produced by Karl Schröder AG for determining the fastness of dyeings and prints to decatizing and their resistance to water and mercerizing agents are described and illustrated.

PRESENT STATE OF LIGHT AND WEATHERING FASTNESS DETERMINATION. E. Brunnschweiler. Textil-Rundschau 14, No. 9: 504-512; No. 10: 595-600 (1959). In German. Through BCIRA 39: 4878 (1959). (1111)

Review of the most important literature contributions dealing with the determination of light and weathering fastness of dyeings and prints. 112 refs.

FASTNESS TO SOLVENTS AND DRYCLEANING. NAPHTHANILIDE AND INSOLUBLE AZO DYES. H. Herzog. Textil-Rundschau 14, No. 9: 494-499; No. 10: 600-607 (1959). In German. Through BCIRA 39: 4879 (1959). (1112)

After some general remarks on the fastness to solvents and drycleaning, the author outlines the development of the official fastness specifications referring to the respective testing methods. An attempt is made to elucidate the processes taking place during fastness tests. The extensive experimental material mentioned shows that the fastness to solvents of many naphthanilide combinations depends upon the nature of the individual components, the naphthanilides, and diazo components.

TESTING PERSPIRATION FASTNESS. H. Heuberger. Textil-Rundschau 14, No. 9: 499-504 (1959). In German. Through BCIRA 39: 4880 (1959). (1113)

A brief review is made of the standards valid at present for testing the fastness to perspiration of dyed fabrics (ECE, SDC, and AATCC methods), and results of experiments carried out with dyeings on cotton, spun rayon, wool, cellulose acetate, polyamide (Perlon), and polyacrylonitrile fabrics are discussed. Details are given of the composition of the excreted perspiration (preparation of the test solution) and the treatment of the fabric to be tested.

BRIGHTENING AGENT DETERMINATION ON VISCOSE STAPLE. W. Berndt and Z. Blace. Textil 14, No. 7: 271-272 (1959). In Czech. Through BCIRA 39: 4777 (1959). (1114)

It is shown that, in the determination of brightening agents on viscose staple, extraction with organic solvents (benzene-ethanol) not only removes the brightening agents but also resins and fats contained in the original cellulose. Attention is drawn to the importance of this phenomenon, when determining the brightening agent content in viscose staple from cellulose differing in the content of extracted material.

IDENTIFICATION OF REMAZOL DYES ON THE FIBER. A. Bode (Farbwerke Hoechst AG). Melliand 41, No. 1: 34-38 (1960). Through BCIRA 40: 139 (1960). (1115)

A method is described for distinguishing Remazol dyes (vinylsulfone reactive dyes), forming an ether linkage with the fiber, and Cibacron dyes (chlortriazinyl reactive dyes) which probably combine with the fiber in the form of an ester linkage.

USE OF PHOTOMETRY IN THE ANALYSIS OF DYES FOR ACETATE RAYON AND SYNTHETIC FIBER. L. M. Golomb and V. V. Karpov. Tekstil. Prom. 19, No. 8: 41-43 (1959). In Russian. Through BCIRA 40: 133 (1960). (1116)

A photometric method for determining the concentration of dye in commercial products, by using various solvents, is described. The method is claimed to be convenient and accurate.

SPECTROANALYSIS OF MINUTE QUANTITIES OF DYES ON FABRICS. J. Derkosch. Melliand Textilber. 40, No. 10: 1194-1196 (1959). In German. Through BCIRA 39: 4792 (1959). (1117)

Dyes on fabrics, e.g. in the form of stains, can be extracted by means of suitable solvents and the nature of the dyes determined by plotting the characteristic color curve.

DETERMINING THE PIGMENT CONCENTRATION IN DYES FOR ACETATE RAYON. L. M. Golomb. Zhur. Priklad. Khim. 32, No. 8: 1834-1842 (1959). In Russian. Through BCIRA 39: 4785 (1959). (1118)

A convenient method developed for the photometric determination of the pigment concentration in acetate dyes (in the form of their hydroaceto- and hydrosulfosols) is described. The reproducibility of the results is satisfactory and the error is lower than in the visual evaluation (± 5%).

MILL MANAGEMENT F

Industrial engineering F1

VARIATIONS FLOW ANALYSIS: TEXTILE MILL APPLICATIONS. N. L. Enrick (Inst. Textile Technol.). Textile Quality Control Papers 7: 85-97 (1960). (1119)

After defining four flow rules, the interpretation of these rules is demonstrated from an example. A table of the modified F-Ratio for evaluation of significance of difference in variation coefficients, within-machine and departmental overall, is presented. Graphs, tables, 7 refs.

MILL PURCHASING PRACTICES, 1960. Textile Inds. 124: 103-118 (Feb. 1960). (1120)

Yarn inventory control, by H. Friedman, p. 103, 117-118; Purchase control in knitwear manufacture, p. 105-107; Human relations in purchasing, by P. H. Dougherty, p. 108-110; Lease or purchase?, p. 111-112, 115; Materials control for a small mill, by A. J. Bohl, p. 113-115.

QUALITY CONTROL. 4th ed. N. L. Enrick. Industrial Press, 93 Worth St., New York 13, N. Y. 1960. 216 p. $5.50. (1121)

New material in the 4th edition: two chapters on statistical tolerancing, for simple and complex tolerance combinations; evolutionary process operation, illustrated from slashing and weaving; an expanded bibliography and table of square roots; an appendix on various alternate calculation methods.

TEXTILE QUALITY CONTROL PAPERS. v. 7, 1960. Am. Soc. for Quality Control, Room 6197 Plankinton Bldg., 161 West Wisconsin Ave., Milwaukee 3, Wis. 1960. 193 p. $5.00. (1122)

Quality control charts, by D. S. Chambers, p. 1-10; Design of industrial experiments, by J. J. Moder, p. 11-22; Production planning and operations research, by N. L. Sample, p. 23-28; Organization for quality, by W. L. Clement, Jr., p. 29-35; Tex: universal yarn numbering system, by B. L. Whittier, p. 37; Quality control education in textile schools, by D. S. Hamby, p. 39-42; Quality control education in industry, by K. K. Edgar, p. 43-44; Standard procedure of quality evaluation for woven textiles, by G. T. Gardner, p. 45-46; Standard procedure of quality evaluation for woven textiles with manual of defects and imperfections, by P. E. DiBianco, p. 47-50; Invoices: their cost and quality, by G. W. Edwards, p. 51-58; Work sampling, by W. J. Richardson, p. 59-63; Quality: a product of high morale, by P. B. Comer, Jr., p. 65; What Sears expects from its vendors in quality control, by R. W. Peach, p. 67-69; Ford's quality certification program-textile vendors, by C. W. Eagle, p. 71-75; A garment manufacturer looks at vendor-vendee quality control programs, by N. A. Shane, Jr., p. 77-84; Variations flow analysis: textile mill applications, by N. L. Enrick, p. 85-97; Analysis of variations for certain physical properties of combed cotton yarns, by D. S. Hamby, R. J. Hader, W. C. Stuckey, and B. Gast, p. 99-124; Measuring the cost of quality control, by P. M. Felker; p. 125-135; Analysis of data from accelerated life tests, by M. L. Godfrey, p. 137-162; Importance of control of moisture in textile fibers, by J. G. Wiegerink, p. 163-187; Textile around the world, by C. L. Adams, p. 189-193.

METHOD FOR DETERMINING THE PRODUCTION CAPACITY IN COTTON FINISHING PLANTS. K. Pinkau. Deut. Textiltech. 9, No. 7: 377-379; No. 8: 431-434 (1959). In German. Through BCIRA 39: 4949 (1959). (1123)

Principles of capacity determination in the textile finishing industry are discussed, and the method is illustrated by examples of calculating the capacities of bleaching, dyeing, and printing departments as the most important sections decisive for the total capacity of a plant.

MULTI-MACHINE ASSIGNMENTS. PART 4. DETERMINING TASK FREQUENCIES. T. F. O'Connor. Modern Textiles Mag. 41: 27, 30 (Feb. 1960). (1124)

The determination of frequency levels of random events is described and illustrated. Diagrs.

PRACTICAL PROGRAM FOR QUALITY CONTROL. National Knitted Outerwear Assoc., 386 Fourth Ave., New York 16, N. Y. 1959. 34 p. (1125)

A manual on quality control for the field of garment manufacture, particularly knitted outerwear and swimwear.

USE OF CONTROL MEANS IN THE TEXTILE INDUSTRY. H. Neumann. Deut. Textiltech. 9, No. 8: 395-401 (1959). In German. Through BCIRA 40: 211 (1960). (1126)

Control techniques in spinning, winding, weaving, warp knitting, textile finishing, and in the making up industry are reviewed, and the devices used for these purposes described and illustrated.

Plant and equipment F2

PREVENTIVE MAINTENANCE CONTROL. W. Sproule. Textile Bull. 86: 42-43, 46 (Feb. 1960). (1127)

The purposes, benefits, administration, and operation of a preventive maintenance program are discussed. Diagrs.

APPLICATION OF SWITCHGEAR TO TEXTILE MILLS. R. N. Wilson (Allis-Chalmers Mfg. Co.). Textile Bull. 86: 65-68 (Feb. 1960). (1128)

General survey of modern practices in the application of switchgear to textile mill distribution systems. Diagrs, tables.

WHAT THE PLANT ENGINEER SHOULD KNOW ABOUT BUILDING DESIGN AND CONSTRUCTION. C. S. Strike (F. H. McGraw & Co.). Am. Textile Reptr. 74: 10, 46-47 (Feb. 11, 1960). (1129)

GUIDE TO MILL BUILDING IN THE '60s. Textile World 110: 62-72 (Feb. 1960). (1130)

Mill-production needs determine building trends, by A. D. Asbury, p. 63-64; Plant location, by T. O. Ott, Jr., p. 64-65; New materials and methods govern mill-building costs, by G. E. McDougall, p. 65-67; Two case projects: (1) Building a new mill, (2) Expanding a present mill, by T. A. Able, Jr., p. 68-69; Machinery layout: vital building factor, by C. P. Roberts, p. 69-71; Materials handling, by T. O. Ott, Jr., p. 71-72.

SCIENCES G

Chemistry G1

AMINO ACID ANALYSIS OF CUTICLE-RICH MATERIAL FROM WOOL. J. H. Bradbury (Wool Research Labs., CSIRO, Australia). Textile Research J. 30: 128-135 (Feb. 1960). (1131)

This paper gives a detailed account of the descaling technique for obtaining cuticle-rich material and the amino acid analysis of the material from 3 samples of wool. Diagr, tables, 31 refs.

AMINO ACID ANALYSIS OF WOOL KERATIN AFTER ULTRAVIOLET IRRADIATION. D. Hildebrand and H. Kersten. Biochem. Z. 332, No. 1: 67-71 (1959). In German. Through BCIRA 40: 184 (1960). (1132)

The amino acid composition was determined in merino wool hydrolysates obtained by irradiating the wool with ultraviolet rays for 40 and 160 hr. In addition to cystine, tryptophan, and tyrosine, proline was also found to be sensitive to ultraviolet irradiation.

ONE-SHOT URETHANE FOAM. W. E. Erner, A. Farkas, and P. W. Hill. Modern Plastics 37: 107-110, 187-190 (Feb. 1960). (1133)

This article describes a special urethane foam catalyst (triethylenediamine) that has significantly altered the production of foams by eliminating a production step from the customarily used foam process. Types of foams that can be produced by this new one-shot process are analyzed. Photos, tables, 8 refs.

DEUTERIUM-HYDROGEN EXCHANGE BETWEEN WATER AND MACROMOLECULES: ACCESSIBILITY OF CELLULOSE. J. L. Morrison (Connaught Medical Research Labs.). (Letter to the editor). Nature 185: 160-161 (Jan. 16, 1960). (1134)

FABRIC SOFTENERS. Consumer Repts. 25: 22-23 (Jan. 1960). (1135)

Use tests showed that fabric softeners used in home laundering were effective in improving the appearance of wash-and-wear garments and in neutralizing the effects of static electricity.

POLYPROPYLENES: THEIR STRUCTURE AND PROPERTIES. C. A. Finch. Fibres and Plastics 21: 14-16 (Jan. 1960). (1136)

Some of the fundamental concepts of the structure of stereospecific isotactic and syndiotactic polymers are pointed out, and their practical importance for fiber development is discussed.

POLYURETHANES: THEIR PREPARATION AND APPLICATIONS. M. Sircon. Fibres and Plastics 21: 22-24 (Jan. 1960). (1137)

The development and current status of the polyurethanes are discussed.

Physics G2

COLOR AND CONSTITUTION. P. Miro. Investigacion e Informacion Textil 2, No. 2: 129-140 (1959). In Spanish. Through BCIRA 39: 4795 (1959). (1138)

NATURE OF STATIC. D. F. Arthur. Nylon Outlook 2, No. 7: 10-15 (Winter 1959/60). (1139)

A qualitative explanation of the origin of static charges is presented, and methods for the dissipation of the charges are briefly outlined. Photos.

MISCELLANY H

EDUCATION FOR THE TEXTILE INDUSTRY. A. R. Urquhart. J. Textile Inst. 51: P16-P27 (Jan. 1960). (1140)

The various types of technical education and training schemes in Great Britain are surveyed.

ITALIAN WOOL TEXTILE DICTIONARY. Lanerossi SpA. Schio, 1958. 160 p. Through BCIRA 39: 4952 (1959). (1141)

The scope of this dictionary (English-Italian, p. 11-136, Italian-English, p. 139-160) is much wider than its title suggests: vocabulary relates to wool and other textile fibers, processes (spinning, weaving, dyeing, finishing), machinery, auxiliaries, and (wool) products. It appears to have been designed primarily for the Italian reader of British and American textile literature, and the first section includes some definitions and phrases.

END-USE MARKET FOR HIGH POLYMERS. C. W. Bendigo (Werner Textile Consultants). Can. Textile J. 77: 59-62 (Feb. 5, 1960). (1142)

Future marketing trends are discussed.

CHEMICAL FIBERS IN THE SOVIET UNION. I. V. Maistrenko (Inst. for Study of USSR). Ind. Eng. Chem. 52: 44A-48A (Feb. 1960). (1143)

The development of the chemical fiber industry in the USSR is reviewed. Information is given on research, geographic distribution of chemical fiber plants, and new construction and equipment under the 7-year plan, which ends in 1965.

ANALYSIS OF THE U. S. MANMADE TEXTILE FIBER INDUSTRY. E. E. Muntz. J. Ind. Econ. 7, No. 3: 221-235 (1959). Through BCIRA 39: 4474 (1959). (1144)

Data from the Textile Organon are used to analyze and discuss location, structure, research, integration, competition, price, and future demand. The merging of the smaller firms with large multiproduct companies has strengthened their position and the larger firms will not be able to establish monopoly prices.

1959-1960 REVIEW AND FORECAST. Textile World 110: 49-53 (Jan. 1960). (1145)

Economic and production trends, as well as mill modernization spending, are briefly reviewed.

STATISTICAL DIGEST OF THE JAPANESE TEXTILE INDUSTRY, NO. 7. Toyo Spinning Co., Ltd, Inst. for Economic Research, Osaka, Japan. Nov. 1959. 16 p. (1146)

Two charts show yarn exports and woven fabrics exports. Tables give figures on production, equipment (operable), number of workers, exports (in quantity), exports (in value), wholesale prices, textile consumption, and imports of raw materials. The figures given go back 25 years or more.

A PROJECTION OF TEXTILE PRODUCTION IN THE UNITED STATES TO 1970. W. H. Miernyk (Northeastern Univ.). Intern. Rev. Cotton Allied Textile Inds. 27: 384-389 (Dec. 1959). (1147)

ROUEN: FRENCH TEXTILE CENTER. H. Wescher. Ciba Rev. 12, No. 135: 2-33 (Dec. 1959). (1148)

Rouen and its port in olden and modern times, p. 2-6; Medieval cloth trade, p. 7-9; John Holker: a promoter of the French textile industry, p. 10-13; "Rouennerie" trade and its entrepreneurs, p. 14-20; Turkey red dyeing, p. 21-26; Normandy textile printing industry of the eighteenth and nineteenth centuries, p. 27-33. Photos.

TEXTILE RESEARCH AND DEVELOPMENT IN THE GERMAN DEMOCRATIC REPUBLIC. Documentation Dept., Research Inst. Textile Technol. Karl-Marx-Stadt. Deut. Textiltech. 9, No. 9: 469-479 (1959). In German. Through BCIRA 40: 256 (1960). (1149)

The work of the Research Inst. Textile Technol., Karl-Marx-Stadt, the Inst. Textile Technol. Chem. Fibers, Rudolstadt-Schwarza, the German Academy of Science, Berlin (Inst. Fiber Research, Tetlow-Seehof and Dresden), the Inst. Textile Machy., Karl-Marx-Stadt, and other research centers is reviewed over the period 1951-1959. Other articles commemorating the tenth anniversary of the German Democratic Republic deal with the development of the textile industry in general and with the cotton and the wool and silk industries in particular, with methods for increasing productivity, standardization, and technical schools.

TEXTILE RESEARCH ACHIEVEMENTS IN 1959. PART 1. J. B. Goldberg. Textile Inds. 124: 92-95 (Jan. 1960). (1150)

PLASTICS: I/EC ANNUAL REVIEW 1959. E. L. Kropa and E. E. McSweeney (Battelle Memorial Inst.). Ind. Eng. Chem. 52: 42A-45A (Jan. 1960). (1151)

New developments during 1959 in plastics are reviewed.

BATIK DESIGNS AND COLORS. Am. Fabrics No. 48: 45-60 (Winter 1960). (1152)

The background and development of Javanese batik designs. The batik technique is described and many designs are illustrated.

PLASTICS: THE YEAR 1959 IN REVIEW. Modern Plastics 37: 151-168, 232-233 (Jan. 1960). (1153)

Review with 514 references.

COTTON TRADE JOURNAL INTERNATIONAL YEARBOOK, 1959-1960. Cotton Trade Journal, Inc., Memphis, Tenn. 1960. 264 p. $3.00. (1154)

Economic integration, as initiated by the establishment of the Common Market and association of the Outer Seven, is the theme of the yearbook which also contains articles on cotton growing, economics, marketing, manufacture, and research in countries all over the world.

TEXTILES: I/EC ANNUAL REVIEW 1959. C. G. Tewksbury and J. F. Krasny (Harris Research Labs.). Ind. Eng. Chem. 52: 62A-64A (Jan. 1960). (1155)

New developments during 1959 in fibers, fabrics, dyes, and finishes.

TEXTILE ENGINEERING PROCESSES. A. H. Nissan, ed. Butterworths Scientific Publications, London. U.S.A. edition published by Textile Book Publishers, Inc., 250 Fifth Ave., New York 1, N.Y. 1959. 366 p. (1156)

A text for students. Contents: The properties of textile fibers, yarns, and fabrics, by W. J. Onions; The basic principles of spinning, by J. S. Taylor and G. R. Wray; The production of cotton yarns, by J. S. Taylor and G. R. Wray; Yarns produced on the woolen system, by P. P. Townend; Yarns produced on the worsted system, by P. P. Townend; Winding, beaming, and sizing, by D. Brunnschweiler; Weaving, by D. C. Snowden; Knitting mechanisms, by P. Grosberg; Wet finishing, by E. Moss and G. J. Parish; Dyeing and printing machinery, by C. B. Stevens and F. V. Davis; Drying, by A. H. Nissan; Humidity control, by W. J. Onions and A. H. Nissan; Automatic control, by G. H. Thorndike. References.

REVIEW OF TEXTILE PROGRESS, v. 10, 1958. Published jointly by The Textile Institute, The Society of Dyers & Colourists, and Butterworths Scientific Publications, London. U.S.A. edition published by Textile Book Publishers, Inc., 250 Fifth Ave., New York 1, N.Y. 1959. 494 p. (1157)

Comprehensive review of advances during 1958 in physics and chemistry of fibers, fiber production, yarn processing, fabric production, dyeing, finishing, testing, laundering and drycleaning, building and engineering, and industrial applications of textiles. Extensive literature references.

INDIAN CENTRAL JUTE COMMITTEE. ANNUAL REPORT ON THE TECHNOLOGICAL RESEARCH SCHEME FOR 1957-1958. Calcutta, 1959. 47 p. (1158)

EMERGENCE OF THE GERMAN DYE INDUSTRY. J. J. Beer. Univ. of Illinois Press, Urbana. 1959. 168 p. Illinois studies in the social sciences, v. 44. $3.50. (1159)

Contents: The founding of the aniline dye industry; Hofmann and the scientific origins of coal tar colors; The first manmade dyes; The decline of the French color industry; The decline of dyestuffs manufacture in Gt. Brit.; Beginning of dye manufacture in Germany and Switzerland; Influence of the university and the polytechnical institute; The rise of the industrial research laboratory; Construction of a sales empire; The dye industry and the German state; Cartel formation; The dye industry during and after the first world war. Bibliography, p. 153-157.

PATENT CHECKLIST

U.S. patents may be obtained from the U.S. Patent Office, Washington 25, D.C., for 25¢ a copy. Photostatic copies of foreign patents are also available. Charges for these photostats are based on the number of pages in the patent.

YARN PRODUCTION B

FALSE TWIST CRIMPING OF THERMOPLASTIC YARNS. J. E. Fielden (to Fielden Electronics Ltd). BP 818 007, Aug. 12, 1959. Through BCIRA 40: 72 (1960). (1160)

The device comprises 2 wheels mounted with their axes parallel to the line joining the twist restraining means and at such a distance apart that their peripheries provide a nip for the yarn. The peripheral surfaces are conical and tapered in opposite directions so that the yarn is held in the nip.

IMPROVING SMOOTHNESS OF YARNS FROM STAPLE FIBERS OF POLYESTERS, POLYAMIDES, OR POLYVINYL COMPOUNDS. Farbwerke Hoechst AG. BP 823 220, Nov. 11, 1959. Through BCIRA 40: 113 (1960). (1161)

Yarns spun from staple fibers that can be softened by heat are smoothed by passage between 2 hot plates after moistening them with water. They may then be sized by conventional means.

CONTINUOUS WINDING APPARATUS FOR COTTON WOOL WEBS. Kistler & Co. BP 823 328, Nov. 11, 1959. Through BCIRA 40: 66 (1960). (1162)

Instead of rolling up a fleece of cotton (e.g. surgical cotton wool) with a sheet of paper, the fleece from a carding machine is fed to the nip of a calender heated to about 120–130° C and then to a winding roller so mounted that it can swing away from the calender as it fills up.

FALSE TWIST CRIMPING APPARATUS. F. Scragg and P. Forward (to E. Scragg & Sons Ltd). BP 823 912, Nov. 18, 1959. Through BCIRA 40: 75 (1960). (1163)

The running yarn is engaged by a hollow solid of revolution having a convex profile and a friction surface (e.g. of synthetic rubber) and is then deflected at right angles by means of upper and lower pigtail guides.

TRAVELING BLOWER FOR TEXTILE MACHINERY. K. Brunner (Germany). BP 824 390, Nov. 25, 1959. Through BCIRA 40: 71 (1960). (1164)

In a device for blowing down dust and fly from spinning and other textile machinery, closable apertures are provided between the pressure chamber of the section to which the downward blower nozzles are attached and the suction section associated with the upward blowers.

CLOSURE FOR STUFFER BOX CRIMPER. E. C. Gibson (to Chemstrand Corp.). USP 2 917 785, Dec. 22, 1959. (1165)

The closure permits the operator to remove and replace the closure with one hand while leaving the other hand free to remove collected fibers.

PROCESS FOR RECLAIMING NYLON FIBER FROM RUBBER-COVERED NYLON FIBER SCRAP. A. Gunther (Argentina). USP 2 921 038, Jan. 12, 1960. (1166)

EDGE-CRIMPING APPARATUS FOR ELASTICIZED THERMOPLASTIC YARNS. F. W. Cox and C. G. Evans (to Deering Milliken Research Corp.). USP 2 921 358, Jan. 19, 1960. (1167)

The surface of the roll which heats the yarn also serves to advance it at a constant rate so that the yarn tension as it passes about the blade edge is regulated by the yarn collecting or advancing means.

TOP DRAFTING ROLL ANTIFRICTION BEARINGS. H. C. Dickey (to Gen. Motors Corp.). USP 2 922 199, Jan. 26, 1960. (1168)

FALSE TWIST CRIMPING APPARATUS. J. A. Tully (to Hobourn Aero Components Ltd). USP 2 923 121, Feb. 2, 1960. (1169)

The invention is characterized by the step of bringing the yarn (as it is unwound from a bobbin and before it is wound into a package) into contact with rotating surfaces having sufficient coefficient of friction to impart a temporary high twist to the yarn.

Carding and combing B2

REVERSING DRIVE FOR SLIVER COILING MECHANISM. H. Clayton and D. Pierrepont (to T. M. M. (Research) Ltd). BP 817 972, Aug. 12, 1959. Summary in BCIRA 40: 67 (1960). (1170)

LAP WINDING MACHINE BRAKING MECHANISM. W. Ulbricht, H. Beck, and M. Freidrich (to VEB Spinnereimaschinenbau). BP 823 711, Nov. 18, 1959. Summary in BCIRA 40: 65 (1960). (1171)

Drawing and roving B3

TEXTILE DRAWFRAMES. W. Nutter (to T. M. M. (Research) Ltd). BP 818 093, Aug. 12, 1959. Through BCIRA 40: 68 (1960). (1172)

The pairs of drafting rollers, etc., are arranged vertically so that the drawn product passes downwards in a straight line to the coiler head and can.

SLIVER EVENER FOR ROVING FRAMES. H. M. Brown. USP 2 922 197, Jan. 26, 1960. (1173)

Slivers of various sizes and densities are fed to the roving frame by means of conical rolls rotating at constant speed, and variations in the rate of feeding are obtained by guiding the sliver into the rolls through a trumpet which may be shifted along the length of the feed rolls.

TEXTILE DRAFTING EQUIPMENT. J. E. Fielden (to Fielden Electronics Ltd). BP 824 070, Nov. 25, 1959. Through BCIRA 40: 69 (1960). (1174)

Means for controlling the regularity of a drafted sliver by altering the diameter(s) of one or both of the front pair of driven rollers on a drawframe. The roller has a hollow shell of rubber, and its diameter is altered by applying to the interior a fluid pressure that varies about a set value in dependence on the thickness of the sliver as gaged by an instrument of the type of the WIRA sliver and roving levelness tester before the sliver enters the rear rollers.

BUILDER CONTROLLED STOP MOTION FOR ROVING MACHINE. E. H. Granberry (to Parks-Cramer Co.). USP 2 922 273, Jan. 26, 1960. (1175)

Means actuated by the tumbler shaft of the builder motion to prevent operation of the stop motion during periods of reversal of the traversing carriage.

Spinning, winding, twisting B4

FALSE TWISTING APPARATUS. E. P. R. Scragg (to E. Scragg & Sons Ltd). BP 818 012, Aug. 12, 1959. Through BCIRA 40: 73 (1960). (1176)

The apparatus comprises a rotatable sleeve having a convex lining of a material characterized by high coefficient of friction, e.g. rubber. The running yarn is held under tension against the lining, and the sleeve may be rotated by contact with a driving belt.

BOBBINS. J. McKechnie (to Gateside Mills Co. Ltd). BP 818 223, Aug. 12, 1959. Through BCIRA 40: 106 (1960). (1177)

The flanges are held to the barrel by means of flanged ferrules that screw into a tubular sleeve inside the barrel.

PLASTIC BOBBINS. J. R. Spencer and H. Hogg (to Textile Paper Tube Co. Ltd). BP 820 810, Sept. 30, 1959. Through BCIRA 40: 107 (1960). (1178)

A molded plastic bobbin has apertured flanges arranged so that gaps in one flange come opposite non-apertured parts in the other and reinforcing webs in the space between the barrel and the hub, inclined to the axis so as to provide compartments with walls diverging from the closed ends.

PLASTIC BOBBINS. E. P. Brook (to Brooke & Burgess (Plastics) Ltd). BP 822 640, Oct. 28, 1959. Through BCIRA 39: 4763 (1959). (1179)

The bobbin is molded in two parts, each consisting of one flange and half of the barrel. The end of one barrel portion is formed with a recess to take a spigot formed on the other, thus locking the two parts together. One flange is molded with radial ribs for driving the bobbin.

PACKAGE SIZE CONTROL FOR RING SPINNING AND TWISTING MACHINES. O. L. Hope. USP 2 922 272, Jan. 26, 1960. (1180)

Pneumatically controlled device, responsive to a predetermined diameter of a yarn package relative to the ring diameter encircling the yarn package, for actuating a yarn parting device.

DOUBLE APRON DRAFTING UNIT FOR SPINNING MACHINES. Schiess AG. BP 823 170, Nov. 4, 1959. Through BCIRA 39: 4739 (1959). (1181)

Guide rollers (3 or 4) are located in the upper belt to pair with guide rollers in the lower belt so as to keep the belts together. At least two successive pairs of rollers have circumferential recesses arranged so that a recess in a top roller mates with a full-diameter stretch of its bottom roller.

FALSE TWISTING MECHANISM. E. P. R. Scragg (to E. Scragg & Sons Ltd). BP 823 582, Nov. 11, 1959. Through BCIRA 40: 74 (1960). (1182)

A false twist tube has a recessed head into which is sprung a wire bent S-shaped to provide loops or hooks around which the yarn is run.

RELEASABLE LOCKING DEVICE FOR TOP DRAFTING ROLL CARRIER ARM OF SPINNING MACHINES. K. Schrotz (to SKF Kugellagerfabriken GmbH). USP 2 920 356, Jan. 12, 1960. (1183)

SPINDLE DRIVE FOR RING SPINNING, DOUBLING, AND TWISTING MACHINES. F. Scragg and P. Forward (to S. & E. Scragg Ltd). USP 2 921 430, Jan. 19, 1960. (1184)

YARN TENSION CONTROL FOR TWO-FOR-ONE TWISTER. F. R. Borges, Jr. (to Deering Milliken Research Corp.). USP 2 921 755, Jan. 19, 1960. (1185)

Biasing means for a yarn tension regulator which utilizes a standard compression spring.

DRAFTING APPARATUS FOR SPINNING MACHINES. W. Barrett (to Prince-Smith & Stells Ltd). USP 2 922 198, Jan. 26, 1960. (1186)

Means for adjusting the position of each pair of rollers along the spinning frame.

TOP DRIVE FILLING SPINDLES. C. R. Sacchini (to Curtiss-Wright Corp.). USP 2 922 274, Jan. 26, 1960. (1187)

The usual tapered steel seating surface is replaced by a yieldable elastic tip surface in order to conform to various seat surface configurations in the bores of commercially available quills to provide effectual friction driving.

TRAVERSE MECHANISM FOR PRODUCING TAPERED YARN PACKAGES ON TWISTING MACHINES. O. L. Hope. USP 2 922 591, Jan. 26, 1960. (1188)

TWISTER RING LUBRICANT. A. J. Morway (to Esso Research & Eng. Co.). USP 2 922 762, Jan. 26, 1960. (1189)

SPINNING MACHINE FRAME. J. Nifenecker (to Soc. Alsacienne de Constructions Mecaniques). USP 2 923 119, Feb. 2, 1960. (1190)

The bed is formed by assembling a number of sections endwise, each section constituting a sheet metal channel bent in a direction parallel to that of the frame and reinforced by welded sheet metal cross members.

PENDULOUS BOBBIN HOLDER FOR SPINNING FRAMES. R. F. Banfield and H. E. Griemsmann (to Bendix Aviation Corp.). USP 2 922 597, Jan. 26, 1960. (1191)

Yarns B5

YARN PACKAGE FOR SHRINKAGE TREATMENT. Papeteries Rene Sibille. BP 822 650, Oct. 28, 1959. Through BCIRA 39: 4764 (1959). (1192)

A rigid inner tube is surrounded by one or more tubes spaced away from the inner tube(s) by bracing rings at the ends and leaving air spaces that cave in under the crushing force during the shrinking process.

SLUB FILAMENTS. L. B. Gibbins and R. H. J. Riley (to Brit. Celanese Ltd). BP 822 706, Oct. 28, 1959. Through BCIRA 39: 4705 (1959). (1193)

A deflecting device is periodically inserted into the path of filaments between a spinneret and a draw roller so as to vary the length of the path and thus create a local variation in thickness of the filaments.

CORE YARNS. Z. K. Carroll-Porczynski. BP 822 823, Nov. 4, 1959. Through BCIRA 39: 4740 (1959). (1194)

A tow of continuous filaments is passed between the feed or back rollers of a direct spinning apparatus (e.g. Stain's) whereby the filaments are broken into staple which then passes on to feed and delivery drafting rollers to which a continuous core or cores is/are also fed by additional rollers. The staple and core are drafted and twisted together.

MELT-SPUN SLUB YARNS. Soc. de la Viscose Suisse. BP 823 013, Nov. 4, 1959. Through BCIRA 39: 4704 (1959). (1195)

Filaments being drawn away from the spinning orifices are exposed at irregular short intervals to traverse streams of a cooling fluid that cause sudden hardening to thick places over short lengths.

BUCKET PROCESS FOR NOVELTY VISCOSE YARN. J. P. Harton (to E. I. du Pont de Nemours & Co.). USP 2 922 275, Jan. 26, 1960. (1196)

Crinkled continuous filament viscose yarn with wool-like resilient nubs along its length is prepared by imparting a pulsating motion to the viscose forming solution as it passes through the spinneret or by drawing the filaments after formation at abruptly changing linear speeds.

IMPROVED RUBBER ADHESION IN NYLON TIRE CORD. R. Levison (to Am. Enka Corp.). USP 2 922 727, Jan. 26, 1960. (1197)

The yarn is impregnated with a solution containing caprolactam oligomers.

NOVELTY CORE YARN MANUFACTURE. J. W. Bush and L. Long (to United Merchants & Mfrs. Inc.). USP 2 923 120, Feb. 2, 1960. (1198)

The yarn is produced by twisting an effect thread around a core yarn by drawing the yarns through a hollow spindle from a cradle below the spindle.

MOLDED PLASTIC SEWING THREAD SPOOLS WITH LABEL ATTACHING MEANS. L. H. Morin (to Coats & Clark, Inc.). USP 2 922 596, Jan. 26, 1960. (1199)

FABRIC PRODUCTION C

Warping, slashing, yarn preparation C1

YARN CLEARER FOR MULTIPLE SPOOLING AND WINDING MACHINES THAT ALLOWS KNOTS TO PASS. E. Hofmann (to Wanner AG). BP 822 520, Oct. 28, 1959. Summary in BCIRA 39: 4762 (1959). (1200)

BOBBIN WINDING MACHINES. R. H. Speakman (to Imp. Chem. Inds. Ltd). BP 822 602, Oct. 28, 1959. Through BCIRA 39: 4759 (1959). (1201)

Two bobbins are mounted side by side on separate coaxial spindles each projecting outwards from central supports and the yarn is fed first to one bobbin until it is full and then to the other. The takeup speed is adjusted by the driving mechanism so that the peripheral speed of the core of the empty bobbin is the same as the speed of the yarn as it leaves the full bobbin.

WINDING MACHINE STOP MOTION. J. K. P. Mackie (to James Mackie & Sons Ltd). BP 823 041, Nov. 4, 1959. Through BCIRA 39: 4760 (1959). (1202)

The stopping device for a cop or roll winder is normally held in the inoperative position by reason of the frictional pull of the running yarn on tensioning means (discs) mounted at one end of a detector lever.

WARP BEAMS FOR LACE MAKING AND WARP KNITTING. B. Frenzel (to VEB Tüllmaschinenbau). BP 823 585, Nov. 11, 1959. Through BCIRA 40: 110 (1960). (1203)

Section beams for coupling together to form a warp beam for tulle, bobinnet and warp knitting machines are mounted with their bosses on saddle-shaped bearings. The bore of each boss is square and fits the square end of a rod, as long as the beam, that can be pushed along so as to couple one beam to the next.

PORTABLE YARN BONDING DEVICE. N. C. Chang and R. E. Langlois (to A. B. Carter Inc.). BP 823 641, Nov. 18, 1959. Through BCIRA 40: 112 (1960). (1204)

The invention relates to a tool with which 2 ends of yarn can be pressed together side by side and treated with an adhesive.

YARN GUIDE. C. H. Moore (to E. I. du Pont de Nemours & Co.). USP 2 919 080, Dec. 29, 1959. (1205)

Flexible, abrasion resistant guide composed of titanium metal coated with nylon except at its yarn contacting portion.

THREAD TENSIONING DEVICE. J. W. I. Heijnis (to Am. Enka Corp.). USP 2 922 598, Jan. 26, 1960. (1206)

Device which imposes a constant drag on a running thread regardless of variations in tension of the thread as it enters the device.

AUTOMATIC BOBBIN WINDING MACHINE. C. G. Rosenkranz, H. Halstenbach, and A. Plutte (Germany). BP 823 894, Nov. 18, 1959. Through BCIRA 40: 109 (1960). (1207)

A winding machine, in which the yarn is passed automatically from a full bobbin to the next tube, is fitted with a 1-piece guide that closely embraces most of the periphery of the bobbin tube so as to keep the yarn pressed against the tube at the start. The guide may be an endless band of rubber running around at least 3 guide rollers.

SIZING COMPOSITIONS FOR SYNTHETIC YARNS. W. Colwill (to Imp. Chem. Inds. Ltd). BP 824 138, Nov. 25, 1959. Through BCIRA 40: 116 (1960). (1208)

The compositions are partially hydrolyzed polyacrylonitriles or polyacrylic esters together with a wetting agent and a lubricant, adjusted to pH 6-8.

REELING APPARATUS. H. Buddecke (Germany). BP 824 305, Nov. 25, 1959. Through BCIRA 40: 108 (1960). (1209)

The yarn is wound at uniform speed on to one end of a drum, moved intermittently along the drum in synchronism with the formation of a hank at the said end, and the hanks are bound, severed during the said movement and discharged from the other end of the drum.

BOBBIN TIP BUNCH BUILDER. R. H. Bourassa and M. S. Korol (to Bates Mfg. Co.). USP 2 921 752, Jan. 19, 1960. (1210)

Weaving C2

BRAKING DEVICE FOR LOOM WARP BEAMS. J. S. Plenderleath (to Jute Inds. Ltd). BP 822 601, Oct. 28, 1959. Through BCIRA 39: 4767 (1959). (1211)

To minimize jerky drag action of a warp beam brake as the beam empties, the brake is fitted with first and second spring-adjustable control devices that combine to effect the initially required drag. The second device is controlled from a feeler arm and operates to reduce the drag progressively as the beam empties.

WEFT MECHANISM FOR STATIONARY WEFT SUPPLY LOOMS. J. R. Walton (to Johnson & Johnson). BP 822 892, Nov. 4, 1959. Through BCIRA 39: 4766 (1959). (1212)

A stationary weft supply loom has a hollow weft carrier that sucks a predetermined length of weft from the supply package, makes a predetermined number of picks until its charge is exhausted, then moves to a refilling station that forms an extension to the raceboard, and starts another picking cycle.

SHUTTLES. J. Dawson (to T. Dawson (Shuttlemakers) Ltd). BP 823 619, Nov. 18, 1959. Through BCIRA 40: 121 (1960). (1213)

A U-shaped clip for holding the pirn or bobbin in the weaving position in a shuttle is made of resilient material, is free from any projection to enter a recess in the yarn package, but has the free ends of its legs formed with outwardly extending lugs that fit into recesses in the sides of the shuttle, near the top, and may have extra lugs for holes in the bottom of the shuttle.

SHUTTLE GUARD. J. Hall. BP 822 934, Nov. 4, 1959. Through BCIRA 39: 4768 (1959). (1214)

The device comprises one or more bars mounted on the lay cap by means of links joined in pairs by springs so that the guard is collapsible towards and away from the lay cap with a parallel motion.

SHUTTLES. R. Foster (to Wool Inds. Research Assoc.). BP 823 264, Nov. 11, 1959. Through BCIRA 40: 120 (1960). (1215)

A slotted deflector is located in the shuttle between the weft package and the eye to prevent a knot in the weft from fouling the usual tensioning plates or their equivalent.

LOOM SHEDDING MECHANISM. Development Textile SA. BP 823 382, Nov. 11, 1959. Through BCIRA 40: 117 (1960). (1216)

In a rectilinear loom the usual reciprocating shedding mechanism is replaced by a rotating drum scored with grooves and slots for the warp ends and weft picks. The warp ends are guided by a comb at the region where they pass to the drum and a stripper is provided to take the fabric off the drum and to lift the weft out of the slots. Each slot includes one arm pointing in the forward direction and another inclined outwards and rearwards at an obtuse angle. The rear wall of this second arm serves as the beatup device.

HAND OPERATED KNOTTERS FOR YARNS AND THREADS. D. N. Cook (to Cook & Co. Manchester Ltd). BP 823 396, Nov. 11, 1959. Through BCIRA 40: 111 (1960). (1217)

The claims are for a trigger-operated knotter that ties a double weaver's knot, especially for use with nylon.

WEFT YARN FEELER AND GRIPPER.. Sulzer Freres SA. BP 823 872, Nov. 18, 1959. Through BCIRA 40: 122 (1960). (1218)

Gripper shuttle type loom has a filling end gripper at least on the exit side of the warp shed, serving to hold the end of weft until it has been beaten up, and a feeler to explore for the weft on the exit side, the movement area of the feeler being on that side of the movement area of the corresponding filling end gripper that is remote from the fabric.

HEDDLE FRAMES. Grob & Co. AG. BP 824 050, Nov. 25, 1959. Through BCIRA 40: 118 (1960). (1219)

An exchangeable intermediate bar for a heddle frame is directly coupled at each end with one heddle bar, with one heddle bar and either a second heddle bar or parts of the stave carrying the first heddle bar, or with the support for this bar, by means of male and female members that are secured together by the elasticity of the bar(s).

PATTERN-SELECTING DEVICE FOR HAND LOOMS. F. Schraegle (Germany). USP 2 920 657, Jan. 12, 1960. (1220)

WEFT CLAMP FOR LOOMS WITH STATIONARY WEFT SUPPLY. R. Dewas (France). USP 2 923 325, Feb. 2, 1960. (1221)

LOOM FOR MAKING PATTERN SAMPLES. E. O. Hoffmann (Chile). USP 2 920 658, Jan. 12, 1960. (1222)

LOOM WARP CONTROL DEVICE. E. Pfarrwaller (to Sulzer Freres SA). USP 2 920 659, Jan. 12, 1960. (1223)

Means for actuating a clutch interposed in the warp beam drive for periodically releasing a predetermined length of warp according to the warp tension.

SPRING ACTUATED PICKER STICK CHECK. H. H. McClamroch. USP 2 920 660, Jan. 12, 1960. (1224)

Single spring arrangement with tension adjusting means for checking the picker stick motion in both directions.

WEFT REPLENISHING MECHANISM FOR LOOMS. W. H. Banks and H. N. Thibault (to Draper Corp.). USP 2 921 610, Jan. 19, 1960. (1225)

Magazine stop mechanism for insuring complete removal of the supply of filling packages from each gravity controlled compartment before the next compartment is advanced to the feeding position.

WEFT YARN HOLDING AND CUTTING MECHANISM FOR SHUTTLELESS LOOMS. W. J. Budzyna and R. H. Brown, Jr. (to Draper Corp.). USP 2 921 611, Jan. 19, 1960. (1226)

LOOM TEMPLE THREAD CUTTER. J. P. Callery and F. F. Larson (to Draper Corp.). USP 2 921 612, Jan. 19, 1960. (1227)

Means for maintaining the movable cutter blade in lateral contact against the fixed cutter blade.

CAM LOOM SHEDDING MECHANISM. T. R. Johnson (to Avondale Mills). USP 2 923 324, Feb. 2, 1960. (1228)

Means for holding down selected treadles at predetermined time intervals to facilitate the formation of plaid or check patterns.

HYDRAULIC SHUTTLE CONTROL FOR JACQUARD LOOMS. H. O. Kaffine. USP 2 923 326, Feb. 2, 1960. (1229)

SHUTTLE FOR NARROW FABRIC LOOM. L. L. Ritsky. USP 2 923 327, Feb. 2, 1960. (1230)

Yarn guide which serves the double purpose of directing the weft yarn as it passes from the bobbin to one of the tension springs and as an outlet eye for the weft yarn as it passes from the other tension spring to the shuttle exterior.

Knitting C3

ELASTIC KNIT FABRICS. Farbenfabriken Bayer AG. BP 823 256, Nov. 11, 1959. Through BCIRA 40: 77 (1960). (1231)

At least 2 stretched polyamide or polyester monofils are twisted to at least 600 tpm alternately with right and left twist, the yarns are used alternately to form hosiery or other knitted goods, and the goods are shrunk by heat.

NARROWING ATTACHMENT FOR FULL-FASHIONED HOSIERY KNITTING MACHINES. C. B. Phillips and J. B. Phillips. USP 2 920 466, Jan. 12, 1960. (1232)

YARN FEED CONTROL FOR CIRCULAR HOSIERY MACHINE. J. W. Dantzler and V. W. Eller. USP 2 920 467, Jan. 12, 1960. (1233)

Attachment for changing the yarn feeding fingers during reciprocatory knitting to enable the machine to knit patterns in the top, heel, foot, and toe areas of Argyle hosiery.

WELT FABRIC TAKEUP FOR FULL-FASHIONED HOSIERY MACHINE. A. J. Cobert (to Beautiful Bryans, Inc.). USP 2 920 468, Jan. 12, 1960. (1234)

HOSIERY SORTING RACK FOR MEASURING, SEPARATING, AND GRADING HOSIERY. R. P. Royer. USP 2 920 765, Jan. 12, 1960. (1235)

TRICOT KNITTING MACHINE. J. Held (to Textile Mach. Works). USP 2 921 452, Jan. 19, 1960. (1236)

Mechanism for coordinating the yarn laying and loop forming elements.

GUIDE BAR LIFTING MECHANISM FOR TRICOT KNITTING MACHINES. H. C. Noe (to Kidde Textile Machy. Corp.). USP 2 921 453, Jan. 19, 1960. (1237)

SEAMLESS HOSIERY MACHINE. T. E. Shastany (to Scott & Williams Inc.). USP 2 921 454, Jan. 19, 1960. (1238)

Method of producing a welt having alternate groups of loose and tight wales to give good appearance combined with stretchability.

SEAMLESS HOSIERY. R. G. Furge (to Real Silk Hosiery Mills). USP 2 921 455, Jan. 19, 1960. (1239)

Hosiery possessing improved shape, sheerness, and strength is produced by simultaneously feeding two monofilaments from independent packages through a single thread finger.

KNITTED UNDERGARMENT. A. M. Evans (to Duofold Inc.). USP 2 921 456, Jan. 19, 1960. (1240)

Undergarments characterized by improved warmth are made from two independent layers of knitted fabric interlocked at spaced wales to form air pockets.

AUXILIARY PREADJUSTING DEVICE FOR FLAT BED KNITTING NEEDLES. G. Kochheim (Germany). USP 2 922 295, Jan. 26, 1960. (1241)

The device has a slidelike support with means for actuating the needle butts to obtain different designs.

OPEN MESH KNITTED FABRIC. R. W. Harris (to A & W Mfg. Corp.). USP 2 923 143, Feb. 2, 1960. (1242)

Warp knit fabric in which the individual stitches upon application of tension contract or expand to give an open mesh appearance in which each opening has a polygonal configuration.

Fabrics C4

TUFTED PILE FABRICS. W. C. F. Swindell (to Brintons Ltd). BP 822 581, Oct. 28, 1959. Through BCIRA 39: 4771 (1959). (1243)

The invention makes it possible to produce narrow tufted fabrics (carpets, moquette and velours) on wide looms. One or more narrow warpway stripes are woven in the full width fabric and the yarns in these stripes are bonded together to form false selvages. The fabric is then cut along the stripes.

PATTERNED, CRINKLED FABRICS. Heberlein & Co. AG. BP 822 597, Oct. 28, 1959. Through BCIRA 39: 4769 (1959). (1244)

The process for the weaving of wavy fabrics in which tensioned, crimped yarns of nylon and the like are used (see abstr. 4387/58) is now extended to the production of pattern effects by combining the weave (e.g. cloqué or stripes) and the finish.

PILE CARPET. W. V. van Gennep. BP 822 754; Oct. 28, 1959. Through BCIRA 39: 4770 (1959). (1245)

A carpet is made by winding yarn helically round formers and assembling these side by side, or by corrugating the yarn, and then bonding the wound or corrugated threads to a sheet of foamed resilient material.

NONWOVEN FABRIC CARPET. P. Miller (to Alexander Smith, Inc.). USP 2 917 421, Dec. 15, 1959. (1246)

A sheet of parallel yarn ends composed of plied yarn are secured to a stretchable backing material by a suitable adhesive.

FELT BINDER. J. Bugosh (to E. I. du Pont de Nemours & Co.). USP 2 917 426, Dec. 15, 1959. (1247)

Fibrous alumina monohydrate having a boehmite crystal lattice is used as a binder.

FIBER FEED MECHANISM FOR NONWOVEN FABRICS. J. d'A. Clark (to Fibrofelt Corp.). USP 2 920 355, Jan. 12, 1960. (1248)

COMBING AND SHEARING APPARATUS FOR KNIT PILE FABRIC PAINT ROLLER COVERS. A. L. Sannipoli and E. E. Thomas (to Seamless Covers Inc.). USP 2 920 372, Jan. 12, 1960. (1249)

Apparatus for combing out the excess fibers and shearing the pile to form a smooth, even surface when the cover is made from a knit sleeve of small diameter.

FINISHING D

Chemical processes D1

HEATING APPARATUS FOR HEATING A STRIP OR TAPE (E.G. OF NYLON) FOR THE PURPOSE OF COATING IT WITH NEOPRENE AND VULCANIZING THE LATTER. Svenska Gasaccumulator AB. BP 820 602, Sept. 23, 1959. Summary in BCIRA 39: 4415 (1959). (1250)

CHLORITE BLEACHING PROCESS. Farbwerke Hoechst AG. BP 822 603, Oct. 28, 1959. Through BCIRA 39: 4820 (1959). (1251)

Cellulosic and synthetic textiles are impregnated with a chlorite solution at pH 3.5-5, squeezed and left in the air at 40-73° C.

ANTISTATIC COMPOSITIONS. A. E. Henshall, E. S. Nicholson, and H. Sagar (to Imp. Chem. Inds. Ltd). BP 822 855, Nov. 4, 1959. Through BCIRA 39: 4827 (1959). (1252)

An antistatic dressing comprises a salt of an organic base with an acid phosphoric ester of an addition product of ethylene oxide and an alcohol, alkylphenol, or aliphatic amide; or the acid phosphoric ester of a quarternary ammonium compound of an addition product of ethylene oxide and an alkylamine.

BLEACHING CELLULOSIC MATERIAL WITH HYPOCHLORITE. Nederlandse Organisatie voor Toegepast. BP 822 974, Nov. 4, 1959. Through BCIRA 39: 4819 (1959). (1253)

The alkaline hypochlorite bath is kept below that concentration above which the electric potential does not increase at an appreciable rate with increasing active-chlorine concentration. Successive additions of hypochlorite are made.

TREATMENT OF WOOL AND NYLON TO IMPROVE THEIR ABRASION RESISTANCE. A. J. I. Harding (to Maifoss Ltd). BP 823 048, Nov. 4, 1959. Through BCIRA 39: 4828 (1959). (1254)

The goods are treated in a hot, aqueous bath at pH 2-5 containing a condensation product of an aromatic sulfonic acid and formaldehyde and a nonionic dispersing agent or a water repellent polysiloxane.

OPTICALLY BRIGHTENING AGENTS. Ciba Ltd. BP 823 227, Nov. 11, 1959. Through BCIRA 40: 161 (1960). (1255)

The agents are 1:3:4-oxadiazoles with benzene nuclei attached directly to the two C atoms.

SILICONE WATERPROOFING COMPOSITIONS. Monsanto Chemicals Ltd. BP 823 760, Nov. 18, 1959. (Addition to BP 804 989). Through BCIRA 40: 171 (1960). (1256)

The compositions are emulsions of hydrosilicones and a titanium catalyst obtained by treatment of a polyhydric alcohol ester of titanic acid with an organic alkali (e.g. an amino-alcohol) to reduce its acidity.

TREATMENT FOR REDUCING PILLING OF POLYESTER FIBERS. D. D. Mooberry (to E. I. du Pont de Nemours & Co.). USP 2 920 980, Jan. 12, 1960. (1257)

Polyether glycol compounds are claimed.

PROTECTIVE SIZE FOR METAL COATED GLASS FIBERS. H. B. Whitehurst (to Owens-Corning Fiberglas Corp.). USP 2 920 981, Jan. 12, 1960. (1258)

The size is composed of rubber latex, starch, tetraethylene pentamine stearic acid condensate, and water.

PROCESS FOR METALIZING CELLULOSE TEXTILES. G. Heberlein and K. Risch (to Heberlein Patent Corp.). USP 2 921 864, Jan. 19, 1960. (1259)

Metal is vaporized and deposited on cellulose material and the treated material is heated to at least 100° C but below its scorching temperature. The resulting product is resistant to peeling.

THREAD STORING AND ADVANCING REEL FOR LIQUID PROCESSING APPARATUS. H. A. Kuljian (to Kuljian Corp.). USP 2 922 296, Jan. 26, 1960. (1260)

The reel is formed of a number of rolls arranged in a circle around a horizontal central axis so that the thread advances in the form of a helix as the rolls rotate.

CORROSION PREVENTION IN CHLORITE BLEACHING. J. Dungler (Switzerland). USP 2 922 695, Jan. 26, 1960. (1261)

The fabric, previously impregnated with the chlorite solution, is exposed to heat in a dry atmosphere within the treating chamber so that the chlorite is transformed into a dry gaseous fluid containing chlorine dioxide.

FLAMEPROOFING NYLON WITH THIOUREA-CONTAINING RESIN. L. J. Moretti and W. N. Nakajima (to Am. Cyanamid Co.). USP 2 922 726, Jan. 26, 1960. (1262)

PREVENTION OF YELLOWING IN FRESHLY SPUN VISCOSE RAYON YARN. G. H. White, Jr. (to Am. Enka Corp.). USP 2 922 728, Jan. 26, 1960. (1263)

Freshly spun yarn is treated with tartaric, citric, or gluconic acid.

Dyeing and printing D2

DYEING OF POLYESTER FIBERS. Farbwerke Hoechst AG. BP 822 483, Oct. 28, 1959. Through BCIRA 39: 4824 (1959). (1264)

Materials of the Terylene group are readily dyed by dispersion dyes for cellulose acetate and by acid dyes for wool if they are first impregnated at 110-130° C with a swelling agent. Agents claimed include dioxane, polyethylene glycol (m.w. 200), caprolactam, diphenyl, benzyl alcohol, benzoic acid, diphenyl ether, a chloronaphthalene carboxylic acid, glycol monobutyl ether, and a tertiary amine.

DYEING MANMADE FIBERS. H. R. Hadfield, R. H. Ricketts, J. Simons, and W. E. Stephen (to Imp. Chem. Inds. Ltd). BP 822 500, Oct. 28, 1959. Through BCIRA 39: 4823 (1959). (1265)

Fibers derived from polyamides, polyurethanes, polyvinyl alcohols and polyacrylonitriles are colored by means of aqueous suspensions of dyes containing a monohalogeno-1,3,5,-triazin-2-ylamino group.

APPARATUS FOR THE DYEING OF SAMPLES. Ciba Ltd. BP 824 344, Nov. 25, 1959. Through BCIRA 40: 162 (1960). (1266)

Apparatus for dyeing a set of samples provides a set of containers, one for each sample, arranged in a circle around an annular heater in a common bath.

INDIGO DYED CELLULOSE FIBER. M. T. Barnhill (to Avondale Mills). USP 2 920 932, Jan. 12, 1960. (1267)

The penetration of indigo dyes is improved by applying a fast color bottom of a substantive vat dye to the fibers.

PRODUCING FAST PINK AND RED PRINTS ON CELLULOSE WITH ICE COLORS. E. Fischer (to Farbwerke Hoechst AG). USP 2 920 933, Jan. 12, 1960. (1268)

FUGITIVE TINTING. J. E. Livak (to Deering Milliken Research Corp.). USP 2 920 975, Jan. 12, 1960. (1269)

Aqueous dispersions of ultramarine pigments suitable for fugitive tinting of noncellulosic manmade fibers.

MULTICOLOR ROTARY DRUM PRINTING MACHINE FOR KNIT GOODS. E. V. Disch (to Plastic Film Corp.). USP 2 921 517, Jan. 19, 1960. (1270)

SURFACE TREATING POLYESTER FIBERS FOR ENHANCED DYEABILITY. J R. Caldwell (to Eastman Kodak Co.). USP 2 921 828, Jan. 19, 1960. (1271)

Polyester fibers with increased receptivity to acid dyes are obtained by treatment with primary amino compounds.

DYEING NYTRIL FIBERS. H. G. Sommar (to B. F. Goodrich Co.). USP 2 921 831, Jan. 19, 1960. (1272)

Vinylidene cyanide interpolymer fibers are made readily dyeable with basic or acetate dyes by the use of a swelling agent such as N,N-diphenylacetamide or N,N-diphenylformamide.

DYESTUFFS FOR DYEING AND PRINTING ACRYLIC FIBERS. R. Mueller and J. Eisele (to Badische Anilin- & Soda-Fabrik AG). USP 2 922 690, Jan. 26, 1960. (1273)

Salt-like dyes formed by the precipitation of dissolved cationic dyes with dissolved anionic dyes are claimed.

ANTHRAQUINONE DYES FOR POLYESTER FIBERS. P. Grossman (to Ciba Ltd). USP 2 922 691, Jan. 26, 1960. (1274)

COLORFAST ACRYLIC FIBERS. A. S. Messer (to Dow Chem. Co.). USP 2 922 692 and 2 922 693, Jan. 26, 1960. (1275)

Acrylic fibers dyed with direct, acid, or chrome dyes are rendered colorfast to light by incorporating a vinyl lactam polymer in the fiber as a dye assistant, and employing an aftertreatment of copper ions (USP 2 922 692) or hydroxyl ammonium sulfate and sulfuric acid (USP 2 922 693).

DYEING CELLULOSIC MATERIALS WITH INORGANIC METALLIC COMPOUNDS. P. F. Crosland (England) USP 2 923 592, Feb: 2, 1960. (1276)

The shade of cellulosic textile materials impregnated with mineral oxides (e.g. mineral khaki) is deepened and made redder by heating the dry dyed material to a temperature of 120° C or higher for a few minutes.

Mechanical processes D3

APPARATUS FOR WINDING OR UNWINDING FLEXIBLE MATERIALS. G. E. Chittenden (to Keelavite Co. Ltd). BP 822 803, Nov. 4, 1959. Through BCIRA 39: 4829 (1959). (1277)

To maintain a constant speed ratio between two drums in the winding of flexible material from one drum to the other, the winding drum is driven by a hydraulic displacement type motor fed by a pump that is controlled by a variable-relief valve responsive to variations in tension in the material.

APPARATUS FOR SPLITTING LACE WEBS INTO STRIPS. A. Cotumaccio. USP 2 921 359, Jan. 19, 1960. (1278)

Machine for simultaneously extracting a series of draw threads in a web of narrow lace strips during a single passage of the web through the machine.

AUTOMATIC DEVICE FOR ADJUSTING FABRIC TENSION IN NAPPING MACHINES. A. C. Scholaert (France). USP 2 923 046, Feb. 2, 1960. (1279)

PLEATING CELLULOSE FABRICS. P. F. Crosland (England). USP 2 923 047, Feb. 2, 1960. (1280)

Use of a pair of grooved, heated, conical rollers for the formation of sunray pleats in a trapezoidal piece of fabric, which may be impregnated, if desired, with a thermosetting resin precondensate.

SUNRAY PLEATING MACHINE. G. Ezbelent (France). USP 2 923 447, Feb. 2, 1960. (1281)

MULTIPLE UNIT FIBER MAT WINDING MACHINE. H. G. Wands and A. L. McPherson (to Gustin-Bacon Mfg. Co.). USP 2 923 487, Feb. 2, 1960. (1282)

Drying, setting, conditioning D4

DRUM SIEVE DRYERS. H. Fleissner and G. Fleissner (Germany). BP 817 393, July 29, 1959. Through BCIRA 39: 4088 (1959). (1283)

A drying machine for fabrics and fleeces has a series of drum sieves linked in sequence and cooperating fans arranged alternately either above and below the drums or at opposite ends.

PERFORATED DRUM DRYERS. E. Kiefer and W. Schmolz (Germany). BP 820 247, Sept. 16, 1959. Through BCIRA 39: 4251 (1959). (1284)

A drying machine for fabrics, loose fiber, and loose chemical materials has a series of perforated, rotary drums arranged side by side in a chamber. The material travels over one drum and under the next, and so on. Fans inside the drums draw hot air through the surfaces in contact with the material and deliver it through the opposite surfaces.

COMBINED FEELER CLIP AND PIN CHAIN LINKS FOR TENTERING AND DRYING MACHINES. Famatex GmbH. BP 820 988, Sept. 30, 1959. Summary in BCIRA 39: 4831 (1959). (1285)

DRYING TRAVELING TEXTILE THREADS. J. P. Bemberg AG. BP 819 997, Sept. 9, 1959. Through BCIRA 39: 4148 (1959). (1286)

The wet thread is led over rotating drums having a large number of electric contacts each with its own current supply so that adjacent contacts are of different polarity. As the thread bears firmly against a contact, a voltage is applied and the current heats it to drying point.

FESTOON RODS FOR USE IN DRYING APPARATUS. F. B. Austin. BP 820 910, Sept. 30, 1959. Through BCIRA 39: 4418 (1959). (1287)

The rods are armored against wear. For example, they may have metal or plastic ferrules at the ends and may be made in short units joined end to end by steel sleeves.

APPARATUS FOR FEEDING STRETCHABLE AND SHRINKABLE WEB MATERIAL IN DRYING. B. F. H. Mellbin. BP 822 394, Oct. 21, 1959. Through BCIRA 39: 4576 (1959). (1288)

Means for driving the upper and lower rows of rollers (steam-heated drums) around which a fabric travels in festoon form in a drying machine.

TESTING AND MEASUREMENT E

Yarns E2

TIRE CORD HIGH SPEED FLEX TESTING MACHINE. E. C. Gibson (to Am. Viscose Corp.). USP 2 916 912, Dec. 15, 1959. (1289)

PORTABLE UNIFORMITY METER. E. J. Bernet (to Inst. Textile Technol.). USP 2 923 881, Feb. 2, 1960. (1290)

Portable apparatus adapted for measuring the uniformity of yarn, roving, sliver, and picker laps directly at the processing machines. It is capable of providing the same degree of sensitivity to small differences in uniformity over a large range of mean values.

Fabrics E3

TESTING APPARATUS FOR CREASE RESISTANCE. W. K. Donaldson (to Tootal Broadhurst Lee Co. Ltd). USP 2 909 921, Oct. 27, 1959. (1291)

The method of testing consists in forming two parallel oppositely directed creases in the fabric specimen, opening the fabric on a flat surface, and optically measuring the inclination of the fabric to the flat surface between the creases.

MILL MANAGEMENT F

Plant and equipment F2

PNEUMATIC APPARATUS FOR CLEANING TEXTILE MACHINES AND FLOORS UNDERNEATH THEM. J. R. Long (to Parks-Cramer Co.). USP 2 910 719, Nov. 3, 1959. (1292)